DEPARTMENT OF DEFENSE APPROPRIATIONS FOR 1952

FRIDAY, AUGUST 17, 1951

SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The committee met, pursuant to adjournment, at 10 a. m., in room 224, Senate Office Building, Senator Joseph C. O'Mahoney (chairman of the subcommittee) presiding.

Present: Senators O'Mahoney, Hayden, Hill, McClellan, Ferguson, and Thye.

DEPARTMENT OF THE AIR FORCE

PROCUREMENT PROGRAM

STATEMENT OF COL. D. L. REDD, DIRECTORATE OF PROCUREMENT AND INDUSTRIAL PLANNING, HEADQUARTERS, AIR MATÉRIEL COMMAND, ACCOMPANIED BY MAJ. J. K. SCRIVNER, PROCUREMENT AND RESEARCH DIVISION, DIRECTORATE OF THE BUDGET, DCS, COMPTROLLER; A. B. THOMAS, TECHNICAL ADVISER TO THE AUDITOR GENERAL, DCS, COMPTROLLER, AND JOHN GANLEY, OFFICE, SECRETARY OF THE AIR FORCE

SALARIES AND EXPENSES

Senator O'MAHONEY. Senator Maybank has been detained by an RFC meeting, and is therefore unable to attend this hearing.

General Asensio, with whom do you wish to start this morning? Colonel Redd?

General ASENSIO. Yes, sir. We start with Colonel Redd, who is the representative for program 190, "Procurement and production administration," which appears on page 40.

Senator O'MAHONEY. Very well, sir.

PERSONNEL ACTIVITIES

Colonel REDD. This estimate under budget program 190 provides for "Procurement and production administrative personnel" and other operating costs required for the Air Force procurement program. In accomplishing their mission, generally speaking, these personnel are required to develop schedules, compute requirements for Government-furnished property and industrial facilities, negotiate with vendors, execute contracts, establish procedures, administer contracts, review manufacturers' estimates of material requirements for aeronautical production, expedite production, review cost proposals submitted by both prime and subcontractors and approve subcontracts as submitted

by the prime contractor to the contracting officer for approval, and make surveys and determine the capabilities of the contractor to do the job as set out in the contract. In addition, they are responsible for auditing the costs incurred in the performance of procurement contracts with industrial concerns and conducting renegotiation of contracts with both prime contractors and subcontractors in accordance with the provisions set forth in section III, Public Law 547 (the Renegotiation Act of 1948) and its subsequent extensions.

Essentially, the majority of personnel in this program are located in the field. Approximately 20 percent will be located at headquarters, Air Matériel Command, Wright-Patterson Air Force Base, Dayton, Ohio, and approximately 80 percent located at or near the source of production.

AMOUNT REQUESTED

During fiscal year 1950, $18,348,000 was obligated and $30,436,549 was obligated as of June 30, 1951, under this program. In this estimate, the Air Force requests $56,780,000 which will provide $52,946,000 for pay of personnel, with a beginning strength of 10,490 and an ending strength of 12,370, resulting in 12,000 man-years, with an average annual salary of $4,412 and $3,834,000 for other operating costs such as temporary-duty travel, communications services, rents and utilities, contractual services, supplies and materials, and social security involved in the purchase and production of aircraft, industrial auditing, and contract renegotiation for fiscal year 1952.

Senator O'MAHONEY. How many positions are now filled?

NUMBER OF POSITIONS

Colonel REDD. Total positions, as of the 3d of August, 11,161.

Senator O'MAHONEY. Was this affected by the personnel cut of the House?

General ASENSIO. Yes, sir; it was, to the extent of 300 man-years, as against our request of 12,000.

Senator O'MAHONEY. Is there any reason why you can't get along with that cut?

General ASENSIO. Sir, the reclama to the action of the House are being submitted through the Department of Defense and will be taken care of altogether through the Department of Defense. They are not always reflective of the Air Force position.

Senator O'MAHONEY. You can understand why I want to get a little line on the Air Force position.

General ASENSIO. If you insist, sir.

Senator O'MAHONEY. I see no reason why you should not tell us what your reaction is. You will have to tell the Secretary of Defense. He will not relay anything that you do not give him, probably, unless he cuts you down.

PERSONNEL CUT

General ASENSIO. That is the point, sir, in this particular area we did not appeal the cut of 300 man-years by virtue of the fact that there was also a reduction in the aircraft and related procurement appropriation of $500,000,000. Inasmuch as the procurement was cut down by that amount, the man-years would not be required, since the man-years are a direct reflection of the procurement activity.

Senator O'MAHONEY. Of course, the cut in the basic appropriation was on the theory that there would be a lag in production and in deliveries. Inasmuch as a very large portion of the appropriation is made to pay for deliveries in future years, it appears to me that there may not be a direct relationship between dollars appropriated and the number of positions to be held.

We have been discussing contract authority, on the theory that we all know there are dollars appropriated in here which will not be expended during fiscal year 1952.

General ASENSIO. Yes, sir; but the dollars give a measure—I was in error in stating a direct measure, but they do give a measure of the contractual activity that will be required, both in the——

Senator O'MAHONEY. You will have to make the same contracts, sir, absolutely, without regard to the number of dollars. That cut in dollar appropriation does not affect your contractual activity one iota, as I see it.

General ASENSIO. It may reflect reduced activity in regard to renegotiations and so forth and so on, sir.

Senator O'MAHONEY. That might be.

General ASENSIO. That is my point, sir. There is a relationship.

Senator O'MAHONEY. Very well.

WORLD WAR II PROGRAM

Colonel REDD. During World War II the peak end-of-year strength in civilian personnel was reached in fiscal year 1944 for the total of 29,885. Further, during World War II, for fiscal years 1943, 1944, and 1945, there was an average end-of-year strength of 26,907 civilians with an average procurement program of $12,181,000,000. With an estimated procurement program of $10,000,000 we are requesting 12,370 end-of-the-year positions for fiscal 1952, which is approximately 82 percent of the procurement program, and only 46 percent of the end-of-the-year positions.

Senator O'MAHONEY. What is your jurisdiction on this procurement activity?

Colonel REDD. I am with the Directorate of Procurement and Industrial Planning, Headquarters Air Matériel Command.

Senator O'MAHONEY. Who is the Director?

Colonel REDD. At the moment General Bradley is the Acting Director.

Senator O'MAHONEY. What is his full name?

Colonel REDD. Mark E. Bradley, Jr.

Senator O'MAHONEY. I think it would be well, before we go into any details on the strength that is proposed, for you to outline the steps taken in making the contracts to protect the appropriations that are made from waste and inefficiency, and indeed from abuses of any kind.

How do you protect it?

Senator FERGUSON. Your job really starts after you are told we want so many of this, so many of that?

Colonel REDD. Yes, sir.

Senator FERGUSON. That is where you start in to get this and that.

PROCUREMENT PROCEDURE

Colonel REDD. Then what we call the purchase request is submitted by the initiating activity to the Procurement Division for procurement.

Senator FERGUSON. Who determines when they want this or that?

Colonel REDD. Usually the initiating agency determines that. After that purchase request comes in to the Procurement Division, it is processed. Then we go to a list of sources we have available for that particular type of product or item. Those people are contacted either by advertising by letter or by invitations to bid.

Senator FERGUSON. I suppose you break it down first. If an order came in for wings, it would be to a certain department?

Colonel REDD. Yes, sir. If it was for aircraft it would go to the Aircraft Section of the Procurement Division.

Senator FERGUSON. If uniforms for airmen?

Colonel REDD. It would go to another big section.

Senator O'MAHONEY. In this justification you break these functions down into three categories. The first is procurement and production, the second is quality control, and the third is administration. Will you not please tell us what those three are? And how you get at this breakdown?

Colonel REDD. The first people are the procurement and production personnel, they consist of personnel at headquarters, Air Matériel Command, in the Procurement Division and in our Production and Resources Division. Those people are charged with the responsibility of placing contracts. When the purchase request comes to them they determine the best potential sources for that and request a proposal, either through the form of advertising or through the form of negotiation. The other people in production and procurement are the people out in the procurement districts that administer this contract after it is placed with the contractor.

Senator FERGUSON. You mean expedite it.

Colonel REDD. They supervise the contract, they approve the contractor's request for reimbursement, they expedite the production, assist the contractor in getting critical materials, assist him in getting machine tools, and assist him in any manner that they can, to improve the delivery of the item on the contract.

Senator FERGUSON. I would have thought that your people who let the contract would know first whether the man was equipped to fulfill the contract.

Colonel REDD. Generally speaking we know that. Those that we have doubt about we go out and conduct a facilities survey at their plant to determine that.

Senator O'MAHONEY. We are getting a little way off the question, it seems to me, Colonel. Bear in mind, I read you these three categories, opposite which we have a certain number of positions. Procurement and production, quality control, and administration. That is the Headquarters Air Matériel Command. On the next page you have the field organization. There again you have procurement and production, quality control, and administration. Administration, therefore, has no place in the discussion of what procurement and production people are doing because you have a separate category for administration.

Colonel REDD. Yes, sir.

Senator O'MAHONEY. What I would like to get, in a few words if we can, is precisely what the work is in each of these three divisions, and which one is the superior.

Colonel REDD. At the Headquarters, Air Matériel Command, the procurement and production people place the contracts, negotiate the contracts with the vendors. They develop production schedules and develop requirements for Government property, make determinations whether a man needs industrial facilities to carry out this contract. Then they place the procurement with him.

The next group is quality control at headquarters. They maintain staff surveillance over the quality-control personnel out in the field. They are highly trained technical people and it is somewhat of a semi-supervisory capacity.

Senator O'MAHONEY. Is this a sort of inspection service.

Colonel REDD. Yes, sir. It is quality control and inspection. The terms are interchangeable.

Senator O'MAHONEY. Are these then the people who are watching the development of a plane as it passes along the production line so that you know you are getting a good machine?

PROCUREMENT SERVICE PERSONNEL

Colonel REDD. Yes, sir. The people who do that, however, are the ones located out in the districts, out in the plants, making the inspection. Then the administrative personnel at Headquarters, Air Matériel Command, they are charged with the responsibility of carrying out the ordinary housekeeping functions, issuing directives and working the manpower requirements.

Senator FERGUSON. It looks to me as if on page 42 the Administrator certainly has a lot of personnel; 1,666 people.

Colonel REDD. Those are personnel, sir, that are out in the air procurement districts, consisting of finance officers, controller personnel. Actually they are really more of a service personnel than they are administrative personnel.

Senator FERGUSON. Why do you class them as administration?

Colonel REDD. It was just a mistake. Normally, in a budget we intend to call those people "service personnel" which they really are.

Senator FERGUSON. How can we tell how many you actually have in the administration on this item? As the chairman has said, you have this administration in each one of the items.

Senator O'MAHONEY. In the field and at headquarters. Of course it is natural that you should have administration people in both. But now you say that the function of the administration category at headquarters is different from that in the field.

Colonel REDD. Yes, sir; because in the field they encompass additional functions that they don't do at headquarters. For example, they have their finance officers. They have a commercial traffic office where they issue Government bills of lading to the contractors for shipment of items.

Senator FERGUSON. How many of these are military?

Colonel REDD. None of those, sir. Those are civilians.

Senator FERGUSON. These are all civilians?

Colonel REDD. Yes, sir.
Senator FERGUSON. How many military have you with them?
Colonel REDD. We have a total of $1,115.
Senator FERGUSON. And where do you list those in the justification?

MILITARY PERSONNEL

Colonel REDD. They are not shown in this. This budget program only covers the civilian personnel requirement. The total military personnel that we have now is 1,115, divided up between the districts and the headquarters. They perform various functions in a supervisory capacity to a great extent.

Senator O'MAHONEY. One of the reasons for my making this inquiry, of course, was to develop the steps which you have taken to prevent waste and inefficiency and abuse. I am prompted to ask the question: Do you have any rule about contacts between procurement officials, civilian or otherwise, and the contractors? We have been hearing of investigating committees develop tales of expenditures on entertainment and one thing or another for procurement officers, and civilian personnel. Not in the Air Force, I may say.

Colonel REDD. We have very strong directives on that. Unfortunately we have had two or three cases. But we have cleaned them out before they did too much damage.

Senator O'MAHONEY. What are the directives?

Colonel REDD. The directive put out by General Cook, when he was the Director, Maj. Gen. or Lt. Gen. Orville Cook, in the form of a directive to officers, pointed out to them that under no conditions would they be permitted to accept or should they accept gratuities from the contractors in any form.

Senator FERGUSON. What is the penalty?

Colonel REDD. Definite suspension from activity.

Senator FERGUSON. Did that happen to General Crawford in the Detroit district?

Senator O'MAHONEY. Crawford is in a different division.

Senator FERGUSON. Have you a different rule in the Air than in the Tanks?

Colonel REDD. No, sir. I presume we have similar rules and regulations covering that matter. It is definitely the policy of our directorate, and it is passed on down from the Commanding General of Air Matériel Command and also continuing notices issued by our Director that it won't be tolerated in any manner.

Senator FERGUSON. Does that apply to civilians?

Colonel REDD. Yes, sir; civilian and military.

Senator O'MAHONEY. I have been getting this information as we proceed with each division.

BREAKDOWN OF PERSONNEL

Senator FERGUSON. I am troubled by your saying that this 1,666 was all civilians. Why have you this on page 47, the Judge Advocate's office, if they are all civilians?

Colonel REDD. There are civilians in the Judge Advocate's office. That 1,666 would be broken down between the district commander's office, Inspector General's office, the Judge Advocate's office, public

information office, controller's office, and commercial traffic office, and personnel administration office. Out of the total of 1,666, 713 of them could be classified as administrative personnel.

Senator FERGUSON. You talk about these being new functions. Who did it before?

Colonel REDD. That was a function that was carried on by the headquarters, Air Matériel Command, before we organized the air procurement districts as exempted stations. They were what we call procurement field offices, nothing more than a branch office of the Director of Procurement and Industrial Planning. But as the program got so large and the activities so great, it was necessary that we decentralize the authority out to the source of production in order to prevent bottlenecks and delays.

Senator FERGUSON. Have you still in effect the system that you put in after the exposure of the Benny Meyers incident?

PROCUREMENT INSPECTION SYSTEM

Colonel REDD. Yes, sir. We have a very aggressive procurement inspection system.

Senator FERGUSON. That was more than an inspection. That was in line with what the chairman asked you about the care that you had taken to use in the expenditure of this money.

Colonel REDD. The care that we take, I think, could be best expressed in this manner. We keep reiterating to our people that they must stick to sound business practices and that they can't compromise on honesty and integrity in any manner.

Senator FERGUSON. Here is the difficulty that we sometimes face: that unless Congress gets in we never hear that there has ever been anything wrong in the procurement of these great mass goods. How do you account for that? Is it covered up? Does it happen and men are disciplined privately or fined, and nobody ever knows about it? What about the embezzlement cases and so forth, the larceny of goods and so forth.

Colonel REDD. At our level, Air Matériel Command, those cases that come there, they are disciplined there in some manner, and headquarters, Air Matériel Command, takes care of it. Maybe General Asensio can throw some light on what headquarters, USAF, does.

Senator FERGUSON. One reason I asked, a few days ago in the San Francisco district, or in California, a colonel was prosecuted. If they are officers are they court-martialed? Are they kept secret? If civilians are they secretly discharged so they can get another job and do the same thing in civilian life?

General ASENSIO. Sir, the effort is to determine any fault before it reaches such proportions by constant surveillance. In the isolated cases which we hope will contine to remain isolated cases, they are assuming greater proportions. We do have these proceedings, but they are not secret proceedings. They are courts martial, if so indicated, or whatever it might be. But no particular effort is made to conceal them from the public at all. We have been fortunate so far in that we have not uncovered any glaring cases, and frankly I think there are no glaring cases of this kind. Consequently there hasn't been any great to-do about it.

FUNCTION OF JUDGE ADVOCATE'S OFFICE

Senator O'MAHONEY. What is the function of the Judge Advocate's office in the field of administration, and how many persons are employed in that?

Colonel REDD. He handles the claims against the Government and any question of plant take-over in the event of a strike, he is the adviser on that. We only have, in the total districts, 12 people in the Judge Advocate's office. We have two in each procurement district. He is the legal adviser to the district commander and to his staff, and especially the contracting officer administering these contracts.

Senator O'MAHONEY. You spoke of a directive prohibiting the acceptance of gratuities, entertainment, and the like. Will you please provide a copy of that directive for the record, and I think it would be well to provide a complete statement in which you will outline the steps that have been taken. I want it understood that as I ask these questions I am not implying that the Air Force procurement is to be criticized. My experience is that by far the great majority of all persons having to do with Government procurement are honest and industrious, and that it is the exception who violates the rule.

But nevertheless, since every once in a while the public learns of rather extraordinary cases, indefensible cases, it is important that we have in the record a complete statement as to the steps that you are taking to prevent any abuse in the expenditures of the funds that we provide. And also, that you show the country what you do to protect the officers and civilian personnel in aircraft procurement from the temptation that some contractors do not hesitate to put in the way of employees.

General ASENSIO. We shall be happy to enter that in the record.

Senator O'MAHONEY. While we are at it, I think you might just as well give us a tabulation of such cases as you may have which have been brought up for discipline during the past year.

Senator FERGUSON. And what the discipline was, Mr. Chairman.

General ASENSIO. Yes, sir.

(The information referred to is as follows:)

Following is résumé of action taken by Air Matériel Command, chronologically, to preclude the acceptance of gratuities by Government employees from Air Force contractors.

A. December 4, 1944, AMC Regulation No. 70–26 was written to insure that all personnel of the Air Technical Service Command, irrespective of the office to which attached, would exercise the strictest care in their relationships with contractors so that the activities of such personnel, no matter how legitimate, would not be subject to suspicion or criticism. Paragraph 6, subject, dealings with contractors, extracted from the above-cited regulation is quoted:

"6. *Dealings with contractors.*—Presents and entertainment or favors, no matter how inconsequential, of a character that may create a sense of personal obligation, will not be accepted from prospective bidders or from contractors. Contractual negotiations will not be conducted at hotels or at other points away from the offices of the initiating or negotiating authority, without permission of the Chief of the Branch or unit in the Division or office concerned, and a memorandum shall be made of the persons present and subjects discussed at such places. These instructions apply not only to personnel responsible for the initiation or negotiation of procurements, but also to personnel engaged in any negotiations with contractors involving monetary considerations, including the negotiation of settlements on terminated contracts, the return of profits under the renegotiation law, the processing of applications for Government-financed facilities, the inspection and acceptance of Government property, and the disposal of Government-owned material and property. In general, any social relationships that may subject the AAF representative to criticism or suspicion will be avoided."

B. In June 1948 this directorate publicized to our personnel engaged in procurement activities at this headquarters extracts from remarks of the Honorable W. Stuart Symington, Secretary of the Air Force, given at a recent meeting of the board of directors, Aircraft Industry Association. Quoted for your information are extracts from the remarks which are pertinent to subject matter:

"With that in mind, it is recommended that when any aircraft company, or aircraft accessory corporation, employs any former member of the Military Establishment, such employment be handled on the condition that said former member does not act as a sales representative; in other words, he not be put in a position where he is attempting to sell or negotiate with his former friends in the Air Force. The dangers here from the standpoint of possible Government or/and public reaction are only too obvious.

"Secondly, the old question of entertainment. We urge that no entertainment funds be approved by the airplane companies for former members of the Air Force to entertain their friends in the Air Force.

"With the critical approach to the future expenditure of these billions of dollars, consistent mutual appearances in bars, night clubs, restaurants, etc., cannot but have a negative effect on those who are anxious to criticize.

"Because of resistance to this program in many quarters, and the natural resentment of the taxpayer to the cost of the military appropriations, no Government funds will ever be spent with closer scrutiny than that which will be given the expense of the 70-group program."

C. In July 1948 the Department of the Air Force published regulation No. 70–5, subject as above, which was binding upon all personnel, military or civilian, engaged in procurement and related duties. This directive enjoined all such personnel to familiarize themselves thoroughly with the instructions contained therein. The instructions contained in Air Force Regulation No. 70–5 emphasized the importance of protecting the interests of the Government and were to be read by all personnel in conjunction with present and future regulations concerning procurement and related subjects. Further, this directive outlined certain statutes which made it a criminal offense for an officer or agent of the United States to engage in practices or activities which are at variance with the full measure of duty which he owes to the United States as such an officer or agent. Certain other practices or activities of officers and other personnel are forbidden either by other law or as a matter of policy by the Department of the Air Force. The attention of all Air Force personnel concerned was directed by Air Force Regulation No. 70–5 to the following sections of the criminal code:

(1) Section 41, interested persons acting as Government agents (18 U. S. C. 93; M. L. 1939, sec. 812).

(2) Section 109, prosecution of claims against the United States (18 U. S. C. 198; M. L. 1939, sec. 840).

(3) Section 112, officer or agent aiding in obtaining contract (18 U. S. C. 202; M. L. 1939, sec. 841).

(4) Section 113, officer or clerk receiving pay in matters affecting United States (18 U. S. C. 203; M. L. 1939, sec. 842).

D. The Director, Procurement and Industrial Planning, headquarters, Air Matériel Command, considered the provisions of Air Force Regulation No. 70–5 of such importance that on August 31, 1948, he reiterated the broad general policy of the Department of the Air Force with regard to conflicting private interests of military and civilian personnel assigned to procurement and related duties. This directorate notice set forth that agents of the Government must not accept gratuities intended to influence the strict impartiality that must prevail in business contracts. Further, this notice directed that all section chiefs within the directorate, Procurement and Industrial Planning, headquarters, Air Matériel Command, chiefs of Air Force procurement field offices, and Air Force plant representatives insured that all present and future military and civilian personnel concerned with procurement were fully acquainted with contents of Air Force Regulation No. 70–5. It further charged such chiefs with the responsibility for maintaining a file for future reference to serve as evidence that all such personnel have read and are completely acquainted with the contents of Air Force Regulation No. 70–5.

E. On the 9th of December 1948, in anticipation of possible criticisms which could arise, this directorate published a notice which extracted portions of Army Regulation No. 600–10, dated July 8, 1944, and change No. 4 dated September 17, 1946. 2E (6) of the above-cited Army regulation was noted in the directive and is extracted below for your information:

"(A) No officer, clerk, or employee in the United States Government employ shall at any time solicit contributions from other officers, clerks, or

employees in the Government service for a gift or present to those in a superior official position; nor shall any such officials or clerical superiors receive any gift or present offered or presented to them as a contribution from persons in Government employ receiving a less salary than themselves; nor shall any officer or clerk make any donation as a gift or present to any official superior. Every person who violates this section shall be summarily discharged from the Government employ. See Revised Statutes 1784.

"(B) (As changed by C3, August 16, 1946) The acceptance by an officer of contributions or gifts from persons not in the Military Establishment or in the employ of the Government in recognition of services rendered or from firms, or their representatives, with whom the officer has negotiated as an agent of the Government is prohibited. Officers will exercise their influence over members of their immediate families to insure that contributions or gifts are not received or accepted from such persons or firms.

The notice referred to charged section chiefs with the responsibility of bringing the contents of the notice to the attention of all personnel under their jurisdiction.

F. On the 3d of February 1950, Directorate Office Instruction No. 30–4, subject, Personnel Interest Affecting Directorate Activities, was published, which established policies and procedures for the prevention of conduct by personnel of this directorate which might lead to suspicion of favor—or undue influence. The scope of this instruction was made applicable to all personnel of this directorate, military and civilian, whose duties required business transactions with contractors and representatives of contractors. The purpose of this directive, while not dealing with the subject of gratuities, did establish a policy which insured that no directorate employee could engage in activities with or make any recommendations for directorate action affecting—

(1) Any contractor in which he has a personal interest.

(2) Any contractor in which he had a personal interest within the preceding 6 months.

(3) Any contractor which owns or controls or which is owned or controlled by a concern in which he has a personal interest.

(4) Any contractor which is in the particular transaction in competition with a concern in which he has a personal interest.

G. Directorate notice No. 58, dated February 8, 1950, and directorate notice No. 18, dated April 20, 1950, subjects, AMC Personnel Relationships with Contractors, were published by this directorate, who deemed it advisable to again place all direct agents on notice that in the making of contracts and in all other dealings in negotiations with contractors extreme care should be used by all Air Force representatives not to be involved in accepting gifts and entertainment, or to become unduly involved socially with contractors. These directives also directed that at least once every 6 months all supervisory personnel in the directorate, procurement and industrial planning, including the Air Force procurement field organization, would bring to the attention of all military and civilian personnel under their immediate jurisdiction various regulations dealing with relationships with contractors. It further reenunciated paragraph 6 of AMC regulation No. 70–26 (referred to in par. 1A above).

H. The 6th of November 1950 the director of procurement and industrial planning wrote personal letters to each chief of an Air Force procurement field office and each Air Force plant representative, in which he reminded these individuals of his previous instructions wherein the director emphasized his desire for all personnel under the supervision of chiefs of Air Force procurement field offices and Air Force plant representatives of the established policies with respect to acceptance of gratuities from contractors and directed that all such chiefs and representatives personally enforce strict compliance with the provisions of such policy. Applicable portions of this letter are extracted for your information.

"The confidence placed in all personnel engaged in Government procurement and contracting activities obligates each of us to conduct ourselves and to discharge our duties so as to avoid casting the slightest reflection or suspicion on our personal integrity and trustworthiness as public servants or on the USAF as a public agency. It is mandatory in the performance of our duties that each of us be constantly alert and refrain from becoming involved in any situation which could possibly reflect discredit to the USAF.

"Acceptance of personal gifts, entertainment and similar favors from contractors or prospective contractors will not, I repeat, will not be tolerated. We must place ourselves above suspicion at all times by declining any offers and all opportunities which may lead others to believe that such relations will be or are reflected in

our official duties. This is not merely a 'repeat performance' of a matter which is required to be periodically brought to the attention of all of us, but is intended for positive implementation including the necessary policing by you that may be required to insure compliance.

"I desire that this letter be brought to the attention of all personnel under your supervision and its importance clearly defined. Each individual, military and civilian, will also be made aware of their responsibility, not only as public servants in the administration and expenditure of public funds, but as taxpayers and citizens to immediately report any instances of unethical relationships and practices."

I. On the 9th of January 1951, the Director of Procurement and Industrial Planning, HQ AMC, by letter, subject, Standard of Conduct for Air Force Personnel Engaged in Procurement Activities, addressed to the chiefs of all Air Force procurement field offices and Air Force plant representatives, reiterated to these offices to examine the manner and to effect a complete understanding of the policy with which we deal with contractors and outlined that since we are the principal procuring activity for the Air Force, the responsibility for conducting procurement on high ethical basis lies mainly with us, and further directed that a proper code of conduct in relationships with contractors be constantly emphasized.

J. On the 24th of January 1951, the Director, Procurement and Industrial Planning, HQ AMC, by letter, subject, Standard of Conduct for AF Personnel Engaged in Procurement Activities, invited attention to all section chiefs of this directorate, including offices comprising the Air Force procurement field organization of the policy statement of the chief of staff, USAF, enunciated in letter dated 12 December 1950, same subject. This letter from the directorate cautioned that as Air Force procurement becomes increasingly important to the national defense program we would find that the eyes of the public and the Congress would be turned to us (AMC) to examine the manner in which we dealt with contractors. It further stated that the avoidance of both apparent impropriety and actual impropriety in our dealings was a serious responsibility that is shared by every Air Force purchasing activity regardless of the size of its operations. The director further, in his letter, outlined that if procurement is to be conducted on a high ethical basis the policy must be completely understood and actively operated. In any dealings with contractors, whether official or unofficial, procurement personnel were cautioned to analyze the implications of their actions and be wary of circumstances that could breed criticism. Vigilance, the director pointed out, would lag if this matter did not receive continuing emphasis, and again requested that personnel involved in procurements be made continuously aware of the responsibility for adhering to proper personal standards of conduct.

K. The expansion of directorate activities and resulting personnel, in March 1951, made it imperative that all personnel in this directorate whose duties required business transactions with contractors and contractors' representatives be made aware of the Air Force policy regarding this matter. Consequently, directorate notice No. 75, subject, AMC Personnel Relationships With Contractors, dated March 21, 1951, was published, which again quoted paragraph 6 of AMC Regulation No. 70–26, referred in to paragraph 1A above.

1. On the 6th of June 1951, a composite directive was written covering supplementary codes of conduct. This regulation, specifically AMC Regulation No. 30–2, dated June 6, 1951, subject, Standards of Conduct for Air Force Personnel Engaged in Procurement Activities, paragraph 5D restated the provisions of paragraph 6 of AMC Regulation No. 70–26, and further outlines that personnel having knowledge of violations of established codes of conduct will be responsible for referring all the known facts through established channels for consideration of disciplinary action.

2. It is further desired to point out that this subject is of special interest to procurement air inspectors who continuously review contracts and contract administration to assure no improper conduct on the part of Air Force personnel. In the event discrepancies in contract administration or in dealing with contractors are found, procurement air inspectors compile case history for transmittal to the Office of Special Investigations for study and further investigation.

3. Since the beginning of the last fiscal year it is desired to point out that two violations have occurred within this directorate, and the following action taken:

A. A contractual specialist, GS–13, was removed from employment at this installation for accepting favors from contractors. The favors included material gifts in cash. He was also accused of fixing contracts for certain contractors in advance so that certain contractors would be sure that their bid would be lower than competitors.

B. An industrial specialist, GS–15, was accused of accepting favors from contractors in connection with the purchasing of several automobiles, car heater and radio, in addition to permitting contractors to pay for hotel accommodations while on official business for the Government. This individual was suspended for 6 months and upon his return to duty placed in a position outside of the procurement directorate.

DEPARTMENT OF THE AIR FORCE,
OFFICE OF THE CHIEF OF STAFF,
UNITED STATES AIR FORCE,
Washington, D. C., December 12, 1950.

Subject: Standards of conduct for Air Force personnel engaged in procurement activities.

To: Commanding general, Air Matériel Command, Wright-Patterson Air Force Base, Dayton, Ohio.

1. The United States Air Force today is confronted with a tremendous management problem which is inherent in the very substantial acceleration of Air Force procurement as an integral part of the current national defense program.

2. It is, of course, incumbent upon the Air Force to handle the tremendous expenditure of public funds which have been entrusted to it in an efficient and economical manner consistent with over-all national defense requirements. We must also do this job honestly and impartially and in such manner as to merit public confidence.

3. I have full confidence in the integrity and ability of Air Force personnel engaged in procurement activities. However, we must take practical cognizance of the various incidents and situations arising out of Government procurement activities of the last war which led to serious charges of malfeasance and extensive congressional inquiries. For example, the Truman committee and its successor committees made frequent reference in their reports to the misconduct of Government officials, particularly those engaged in procurement activities. The following quotations pertain to only one aspect of the various forms of misconduct indicated by the committee, but they serve to make the general position of Congress on this matter unmistakably clear:

(*a*) "The committee is of the opinion that any firm or individual doing business with the Government that furnishes lavish entertainment, gifts, hotel accommodations, or incurs other expenses for Government officials with whom they are doing business, is subject to severe censure. * * * On the other hand, Government officials who accept gratuities from individuals and companies with whom they are carrying on official dealings not only show poor judgment, but exhibit a lack of propriety which cannot be tolerated in public servants."

(*b*) "The committee is aware that many war contractors sought to curry favor with and influence decisions of Government officials by this means. The practice ranged from innocently tendered, inexpensive luncheons to lavish entertainment, expensive gifts, and promises of high-paying positions by which contractors intended to influence public officials. The general public rightfully expects that Government procurement officials will carry out their duties fairly, honestly, and in the best interests of the Government. This cannot be done if these officials obligate themselves to contractors by the acceptance of entertainment, gratuities, and other favors. Procurement agencies should do everything within their power to prevent such practices and it should be an established policy to take prompt and drastic action against those officials who accept such benefits."

4. I recognize that all commanders are just as interested as the Congress in seeing that Air Force business is conducted in an honest, impartial, and efficient manner. Equal recognition must be given to the fact that our Air Force is faced with a real and growing problem. The magnitude of the defense program and the important role that has been allotted to the Air arm presage a procurement expansion that will tax our best efforts. Past experience has forcefully demonstrated that situations have arisen in connection with Government procurement and disposal activities that have invoked the criticism of segments of the American public and Congress; and we must take cognizance of the fact that official comments, such as those quoted above, have been predicated upon actual occurrences not only in other branches of the Government but within the Air Force as well.

5. Air Force action is but the sum total of thousands of individual actions. In discharging our trust, we must impress upon all Air Force personnel, military and civilian, the serious personal responsibilities that attach to them in the positions they hold as Government employees.

6. The answer does not lie alone in issuing directives. Prohibitions have existed in the past and there have been derelictions in spite of them. The Air Force position has been stated in many USAF policy pronouncements and regulations, and in Air Matériel Command directives over the past several years dealing with the subject of unethical practices. Although this position has been outlined at various times, at different levels and through several media, we must constantly strive to insure that the code of conduct enunciated in these directives is not merely read at the time of issuance and then forgotten. We must take all steps necessary to impress upon our personnel that these policy pronouncements and directives are personally applicable to them in their daily operations.

7. What is needed is a constant awareness that an actual and potentially serious problem does exist and an aggressive insistence by all in positions of authority on a proper code of conduct in connection with all procurement and disposal activities. I realize that the "do's" and "don'ts" having a bearing on this problem have been promulgated frequently in the past. However, in view of our vastly expanding procurement program, I believe it would be well again to reiterate the Air Force position on this matter and to repeat it in the future as often as circumstances dictate. Repetition will serve to impress upon and ingrain in the older employee the importance of the matter and is required to bring the message home to the new arrival. It is not sufficient to delineate between right and wrong, legality and illegality, but it is equally important to stress the necessity of avoiding even the appearance of impropriety. A great number of complaints have been received which, at least in the initial stages, have raised questions as to the impartiality and integrity of Air Force personnel. Full investigation of these charges has resulted, in most instances, in a determination that no criminality or substantial irregularity was involved, but frequently some Air Force personnel, through carelessness, injudicious remarks, or noncompliance with administrative requirements, have provided a basis for the complaint. We may never be able to satisfy all of our critics all of the time, but we must try. It is unfortunate in public service that even the best intentioned acts are often misconstrued. No matter how adequate the denial, the impact of the charge cannot always be dispelled. Thus, the avoidance of the appearance of evil is in many ways as important as the avoidance of evil itself.

8. In the past there has been some indication that this larger concept has not been fully appreciated by all concerned. Where it is warranted, the punitive, remedial action provided in applicable directives should be promptly invoked, and in those instances where over-all administrative deficiencies have been contributory factors, prompt corrective action must be taken.

9. All Air Force procurement, whether it be accomplished through the Air Matériel Command, or at the base level, must be handled honestly, impartially, efficiently, and with the best interest of the Government paramount in every consideration. Only through constant vigilance can we merit a "well done" when we are called to render an account of our stewardship. This is one of your important responsibilities as a commander.

HOYT S. VANDENBERG,
Chief of Staff,
United States Air Force.

AFR 70–5
1–5

AIR FORCE REGULATION
No. 70–5

DEPARTMENT OF THE AIR FORCE
WASHINGTON, *1 July 1948*

PROCUREMENT AND CONTRACTING

STANDARD OF CONDUCT FOR ALL MILITARY AND CIVILIAN PERSONNEL IN THE AIR FORCE ENGAGED IN PROCUREMENT ACTIVITIES

	Paragraph
Purpose	1
Scope	2
Ethics	3
Statutes	4
Policy	5
Personnel	6

1. *Purpose.* The purpose of this Regulation is to prescribe the standards of conduct for all military and civilian personnel in the Air Force engaged in procurement and related duties.

2. *Scope.* This Regulation is binding upon all persons, military or civilian, engaged in procurement and related duties. All such personnel are enjoined to familiarize themselves thoroughly with the instructions contained herein. These instructions emphasize the importance of protecting the interests of Government and should be read in conjunction with present and future regulations concerning procurement and related subjects.

3. *Ethics.* The business ethics of all persons charged with the administration and expenditure of Government funds must be above reproach and suspicion in every respect at all times. The Supreme Court has aptly stated that as a general rule all men have a moral obligation to refrain from placing themselves in relations which excite conflict between self-interest and integrity.

4. *Statutes.* There are certain statutes which make it a criminal offense for an officer or agent of the United States to engage in practices or activities which are at variance with the full measure of duty which he owes to the United States as such an officer or agent. Certain other practices or activities of officers and other personnel are forbidden either by other law or as a matter of policy by the Department of the Air Force. The attention of all concerned is directed to the following sections of the criminal code:

a. Sec 41, Interested persons acting as government agents (18 U. S. C. 93; M. L. 1939, sec 812).

b. Sec 109, Prosecution of claims against the United States (18 U. S. C. 198; M. L. 1939, sec 840).

c. Sec 112, Officer or agent aiding in obtaining contract (18 U. S. C. 202; M. L. 1939, sec 841).

d. Sec 113, Officer or clerk receiving pay in matters affecting United States (18 U. S. C. 203; M. L. 1939, sec 842).

5. *Policy.* The broad general policy of the Department of the Air Force with regard to conflicting private interests of military and civilian personnel assigned to procurement and related duties is set forth as follows:

a. Every member of the Air Force, military or civilian, is bound to refrain from all business and professional activities and interests not directly connected with his duties which would tend to interfere with and hamper in any degree his full and proper discharge of such duties and would normally give rise to reasonable suspicion that such participation would have that effect. If such person finds that his duties require him to act as an agent of the United States in a manner from which he may derive financial profit or other benefits, he will report the facts immediately to higher authority and he will be immediately relieved from such duties.

b. Agents of the Government must not accept gratuities intended to influence the strict impartiality that must prevail in all business contacts.

6. *Personnel.* The importance of the procurement function to the Air Force makes the selection and instruction of procurement personnel a matter of major importance to appointing officials. Such personnel is not only responsible for protecting the Government's interest, but also for maintaining the reputation of the Air Force for honesty, courtesy, and fair dealings in all relations with contractors.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

HOYT S. VANDENBERG,
Chief of Staff, United States Air Force

OFFICIAL:
E. E. TORO
Colonel, USAF
Acting Air Adjutant General

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AMC REGULATION)
No. 30–2)

HEADQUARTERS, AIR MATÉRIEL COMMAND
WRIGHT-PATTERSON AIR FORCE BASE

6 June 1951

PERSONNEL

STANDARDS OF CONDUCT FOR AIR FORCE PERSONNEL ENGAGED IN PROCUREMENT ACTIVITIES

(This Regulation supersedes AMCL 30–5, 8 Sep 47; HOI 70–9, 9 Aug 45; and Hq AMCN's 200, 18 Dec 50, and 40, 24 Feb 50.)

1. *Purpose.* The purpose of this Regulation is to reemphasize and supplemen codes of conduct of both military and civilian personnel in the AF as prescribed in current Air Force directives.

2. *Scope.* This Regulation is applicable to all Air Force personnel, military or civilian, engaged in procurement and related duties.

3. *References.* Personnel are enjoined to familiarize themselves thoroughly with the following directives:

a. AFR 30–30, as amended, "Representative Activities by Former Personnel, Both Military and Civilian, and by Retired Officers."

b. AFR 70–5, "Standard of Conduct for All Military and Civilian Personnel in the Air Force Engaged in Procurement Activities."

c. AFR 70–18, "Unauthorized Release of Procurement Information."

d. AFL 30–3, "Relationships of Air Force Officers and Industrial Representatives."

e. AFM 40–1, Chapter C2, "Conduct of Employees."

f. Federal Personnel Manual, Chapter C2, "Conduct of Officers and Employees."

4. *Definition.* Procurement and related activities consist of initiation of purchase requests; the conduct of negotiations for purchase, sale, lease, or termination; the evaluation of bids; the making and approving of awards; the processing of claims; and the conduct of inspection.

5. *Supplementary Codes of Conduct.*

a. Commitments. Contracting officers and their duly authorized representatives are the only individuals authorized to commit the Government to legally binding contractual agreements and then only to the extent of the authority vested in such individuals. Unauthorized commitments to contractors cause considerable embarrassment to this Command, as well as to the Department of the Air Force, and may subject the individual making an unauthorized commitment to personal liability with resultant penalties. Unauthorized commitments are detrimental to AF relationships with industry and, in some instances, result in imposition of hardships on business concerns. Contracting officers and their representatives are required to comply with numerous laws and regulations governing all phases of contracting and cannot be expected to take contractual action to confirm unauthorized commitments made by other parties. For these reasons, the following policy will be strictly observed:

(1) Unauthorized personnel will not attempt to interfere, in any way, with established processes of open competitive bidding and negotiation.

(2) No commitment, offer, or promise as to award of a contract will be made, nor will bids be discussed except by authorized personnel of the procuring activity.

(3) Informal commitments by contracting officers will be confined to cases wherein such commitments are authorized by regulations; e. g., small purchases under the public exigency clause in Public Law 413, 80th Congress. Such informal commitments will be confirmed in writing as promptly as possible in each case.

(4) No individual, including the contracting officer, will orally authorize contract changes or engineering changes, except as provided in AMCR's 70–18 and 70–36.

(5) Waiver of requirements of a contract or specification will not, in any case, be recommended by unauthorized personnel because of alleged financial hardship to the contractor or for the purpose of increasing the monetary allowance under a contract.

(6) Additions or improvements to the plant or buildings of an existing or prospective contractor will not be suggested or promised except by duly appointed and authorized personnel of the Directorate, Procurement and Industrial Planning, Hq AMC.

(7) Information concerning, or aid in, the preparation of any claim against the Government will not be given, except as provided in AFR 112–2 or other official publications. In no case, prior to official adjudication of a claim, will a claimant be advised that his claim will be approved or disapproved.

b. Representation. It is imperative that military or civilian personnel of the Air Force not represent private persons or corporations in seeking contracts or other actions from the Air Force. Such action may constitute violation of Federal criminal laws and in any event places the Air Force in an embarrassing position. Regardless of good intention, Air Force personnel must not knowingly deal with representatives of private interests when such representatives are military or civilian personnel of the United States Government.

c. Release of Information. All personnel of this Command will refrain from divulging to prospective bidders or contractors the amount of money allotted or tentatively allotted to procurements or the estimated cost figures for items appearing on authorities for purchase and purchase requests.

d. Social Relationships. Presents, entertainment, or favors, no matter how inconsequential, will not be accepted from prospective bidders or from contractors, because such acceptance might create a sense of personal obligation or give the impression that such obligation exists. Contractual negotiations will not be conducted at hotels or at other points away from the offices of the initiating or negotiating authority, without permission of the chief of the branch or unit in the division or office concerned, and a memorandum shall be made of the persons present and subjects discussed at such places. These instructions apply not only to personnel responsible for the initiation or negotiation of procurements, but also to personnel engaged in any negotiations with contractors involving monetary considerations, including the negotiation of settlements on terminated contracts, the return of profits under the negotiation law, the processing of applications for Government-financed facilities, the inspection and acceptance of Government property, and the disposal of Government-owned material and property. In general, any social relationships that may subject Air Force personnel to criticism or suspicion will be avoided.

6. *Violations.* Personnel having knowledge of violations of established codes of conduct will be responsible for referring all the known facts, through established channels, for consideration of disciplinary action (reference AFM 40–1 and Federal Personnel Manual).

BY COMMAND OF LIEUTENANT GENERAL CHIDLAW:

[SEAL]

RUDOLPH BRANNAN
Lt. Colonel, USAF
Acting Air Adjutant General

Official:

RUDOLPH BRANNAN
Lt. Colonel, USAF
Acting Air Adjutant General

DISTRIBUTION:
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(This is a proposed DOI expected to be issued within the next week.)

HEADQUARTERS, AIR MATÉRIEL COMMAND, WRIGHT-PATTERSON AIR FORCE BASE

Dayton, Ohio

MCPAXP/VCV/1b
August 7, 1951.

DIRECTORATE OFFICE INSTRUCTION NO. 70 (PROCUREMENT AND INDUSTRIAL PLANNING)

Subject: Procurement and Contracting: Standards of Conduct for AF Personnel Engaged in Procurement Activities.

1. *Purpose.* The purpose of this office instruction is to assure that each individual who exercises any discretionary authority with respect to contract

placement is aware of the standards of conduct for AF personnel engaged in procurement activities, and the penalties for violation of these standards.

2. *Scope.* This office instruction applies to all contracting officers, buyers, and assistant buyers of the Directorate, Procurement and Industrial Planning.

3. *General.* Contracting officers, buyers and assistant buyers will be required to certify that they have read and understand the provisions of AMC Reg. No. 30–2 and are aware of the penalties set forth in the criminal code as indicated in par. 4 below.

4. *Statutes.* 18 U. S. Code, provides:

a. SECTION 216: "Whoever being * * * an officer, employee or agent of the United States directly or indirectly takes, receives or agrees to receive any money or thing of value for giving, procuring or aiding to procure to or for any person any contract from the United States or from any officer, department or agency thereof, or

"Whoever directly or indirectly offers, gives or agrees to give any money or thing of value for procuring or aiding to procure any such contract.

"Shall be fined not more than $10,000 or imprisoned not more than two years or both and be disqualified from holding any office of honor, profit, or trust under the United States.

"The President may declare void any such contract or agreement."

b. SECTION 201: "Whoever promises, offers, or gives any money or thing of value * * * to any officer or employee or person acting for or on behalf of the United States or any department or agency thereof, in any official function * * * with intent to influence his decision or act upon any question, matter, cause or proceeding * * * or with intent to influence him to commit or aid in committing or to collude in or allow any fraud or make opportunity for the commission of any fraud on the United States or to induce him to do or permit to do any act in violation of his lawful duty shall be fined not more than three times the amount of such money or value of such thing or imprisoned not more than three years or both."

c. SECTION 281: "Whoever, being the head of a department or any other officer or clerk in the employee of the United States shall, directly or indirectly receive or agree to receive any compensation whatever for any service rendered or to be rendered either by himself or another, in relation to any * * * contract * * * or other matter in which the United States is a party * * * shall be fined not more than $10,000 and imprisoned not more than two years.

5. *Responsibilities.*

a. The administration Office of each Section of the Procurement Division and the Administration Office of the Production Resources Division will be responsible for:

(1) Obtaining a properly executed certificate (MCP Form No. _____ Incl No. 1) from each contracting officer, buyer, and assistant buyer assigned their activity.

(2) Maintaining a current file of the required certificates.

b. The Inspector General Reports and Compliance Branch, Administration Office, will be responsible for conducting a semi-annual review of the above referenced files to assure that they are maintained in a current status.

6. *Supply of Forms.* MCP Form No._____ will be requisitioned from the Supply Branch, Administrative Section (MCPAXA–2).

MARK E. BRADLEY, Jr.,
Brigadier General, USAF,
Acting Director, Procurement and Industrial Planning.

DISTRIBUTION:
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CERTIFICATE

Date_____

I _____, certify that I have read and understand the contents
(name)
of (1) AMC Regulation No. 30–2 and (2) Paragraph 4 of DOI NO. 70– , covering standards of conduct for AF personnel engaged in procurement activities

_____
(signed)

HEADQUARTERS, AIR MATÉRIEL COMMAND
WRIGHT-PATTERSON AIR FORCE BASE
Dayton, Ohio

MCPAXP1/ECJ/1rt
21 March 1951

DIRECTORATE NOTICE No. 75

Subject: AMC Personnel Relationships with Contractors

1. The purpose of this notice is to call to the attention of personnel (military and civilian) in the Directorate, Procurement and Industrial Planning, and the Air Procurement Districts, the Air Force policy set forth in paragraph 6, AMC Regulation No. 70–26, AMC letter No. 30–5, and in DOI No. 30–4.

2. The recent expansion of directorate activities and resulting additional personnel make it imperative that all personnel in this Directorate whose duties require business transactions with contractors and contractors' representatives be continually aware of Air Force policy set forth in the regulations referred to in paragraph one of this notice.

3. Paragraph 6, AMC Regulation No. 70–26, contains the following:

"Presents and entertainment or favors, no matter how inconsequential, of a character that may create a sense of personal obligation, will not be accepted from prospective bidders or from contractors. Contractual negotiations will not be conducted at hotels or at other points away from the offices of the initiating or negotiating authority, without permission of the chief of the branch or unit in the division or office concerned, and a memorandum shall be made of the persons present and subjects discussed at such places. These instructions apply not only to personnel responsible for the initiation or negotiation of procurement, but also to personnel engaged in any negotiations with contractors involving monetary contracts, the return of profits under the renegotiation law, the inspection and acceptance of Government property, and the disposal of Government-owned material and property. In general any social relationships that may subject Air Force personnel to criticism or suspicion will be avoided."

4. AMC Letter No. 30–5 quotes for the information and strict compliance of all concerned, applicable provisions of regulations and Public Laws concerning AMC personnel relationships with contractors.

HEADQUARTERS, AIR MATÉRIEL COMMAND
WRIGHT-PATTERSON AIR FORCE BASE
Dayton, Ohio

9 January 1951

Subject: Standards of Conduct for Air Force Personnel Engaged in Procurement Activities

To: Ch, Buying Secs Districts

1. I direct your earnest and continuing attention to the attached policy statements by General Vandenberg and General Chidlaw. Since we are the principal procuring activity for the Air Force, the responsibility for conducting procurement on a high ethical basis lies mainly with us.

2. Our job in the National Defense Program is becoming increasingly important. We will find that the eyes of the public and the Congress will more and more be turned to us to examine the manner in which we deal with industry. As emphasized by General Vandenberg, we must guard against apparent impropriety in our dealings just as resolutely as against actual impropriety.

3. To do this, we need more than a complete understanding of the policy. The policy must be actively observed at all times. In any dealings with contractors, whether official or unofficial, each of our personnel must analyze the implications of his actions and be wary of circumstances that could breed criticism. This requires that honesty be augmented by rigid impartiality and that the ethical consideration not be overlooked in making technical decisions.

4. If the proper code of conduct in relationships with contractors is not constantly emphasized, vigilance may lag. I am sure that I will have your cooperation in keeping all personnel under your supervision constantly aware of their personal responsibilities in this matter.

ORVAL R. COOK,
Major General, USAF Director, Procurement and Industrial Planning.

HEADQUARTERS, AIR MATÉRIEL COMMAND

WRIGHT-PATTERSON AIR FORCE BASE

Dayton, Ohio

24 January 1951

Subject: Standards of Conduct for Air Force Personnel Engaged in Procurement Activities

To: CG of all Commands

1. Your attention is invited to the attached policy statements by the Chief of Staff, USAF.

2. As Air Force procurement becomes increasingly important to the National Defense Program, we will find that the eyes of the public and the Congress will more and more be turned to us to examine the manner in which we deal with contractors. The avoidance of both apparent impropriety and actual impropriety in our dealings is a serious responsibility that is shared by every Air Force purchasing activity, regardless of the size of its operations.

3. If procurement is to be conducted on a high ethical basis, the policy must be completely understood and actively observed. In any dealings with contractors, whether official or unofficial, procurement personnel should analyze the implications of their actions and be wary of circumstances that could breed criticism. This requires that honesty be augmented by strict impartiality and that the ethical consideration not be overlooked in making technical decisions.

4. Vigilance may lag if this matter does not receive continuing emphasis. I would appreciate your cooperation in keeping all procurement personnel under your jurisdiction constantly aware of their responsibilities for adhering to proper personal standards of conduct in procurement.

ORVAL R. COOK,
Major General, USAF, Director, Procurement and Industrial Planning.

AFR 30–30
1–3

AIR FORCE REGULATION
No. 30–30

DEPARTMENT OF THE AIR FORCE,
WASHINGTON, *18 June 1948.*

PERSONNEL

REPRESENTATIVE ACTIVITIES BY FORMER PERSONNEL, BOTH MILITARY AND CIVILIAN, AND BY RETIRED OFFICERS

	Paragraph
Purpose	1
General Policy	2
Former Personnel, Both Military and Civilian	3
Retired Officers	4
Reserve Officers and Members of the National Guard	5

1. *Purpose.* The purpose of this Regulation is to insure that present personnel of the Department of the Air Force will not knowingly participate with retired officers or former personnel, military or civilian, of the Department of the Air Force, Department of the Army, War Department, or the Army, in violation of statutory restrictions or the general policy set forth herein which have been designed primarily to prevent conflicts of interest on the part of the personnel concerned or the bringing of improper influences to bear on Government personnel.

2. *General Policy.* Former personnel and retired officers of the afore-mentioned services will not be permitted to deal with the Department of the Air Force in a representative capacity in any matter, including claims, if the individual concerned personally considered the matter or gained personal knowledge of the facts thereof while connected with these services. The same restriction is applicable to a person who is not included among such former personnel if he is directly associated in the particular matter involved with a person who is covered by the preceding sentence.

3. *Former Personnel, Both Military and Civilian:*

a. The provisions of R. S. 190, 5 U. S. C. 99, as modified by section (j) of the Renegotiation Act, 50 U. S. C. App. 1191 (j), and section 19 (e) of the Contract Settlement Act of 1944, 41 U. S. C. 119, make it unlawful for former personnel, within two years after termination of their incumbency, to prosecute or act as

counsel, agent, or attorney for prosecuting or aiding in the prosecution of any claim against the United States which was pending when the individual concerned was an officer, clerk, or employee and which involves any subject matter with which such individual was directly connected when so employed.

b. Section 27 of the Surplus Property Act of 1944, 50 U. S. C. App. 1636 prohibits representative activities by former personnel within two years after the termination of incumbency in connection with any matter involving the disposition of surplus property by the agency in which such person was employed, if during his employment such person ratified, approved, or authorized the disposition of any surplus property pursuant to the act or recommended any such approval, authorization, or ratification as part of his official duties.

c. In any matter, including claims, which involves representation by a person whom the Government representative concerned has reason to believe may be a former member whose incumbency has been terminated within less than two years or where there is reason to believe that a violation of the policy expressed in paragraph 2 may be involved, an affidavit will be requested of the former member stating:

(1) His former connection with the Department of the Air Force, Department of the Army, the War Department, or the Army, giving the date of entrance on duty and the date of termination thereof;

(2) A statement whether his duties in such former connection related to subject matter of the nature of that involved in his representation;

(3) That while he was connected with the Department of the Air Force, the Department of the Army, the War Department, or the Army, the matter was not pending therein, or if it was so pending:

(a) That he gave no personal consideration to it and gained no personal knowledge of the facts thereof while so connected;

(b) That he is not and will not be associated in the particular matter with any person who has personally considered it or gained personal knowledge of the facts thereof while connected with the Department of the Air Force, the Department of the Army, War Department, or the Army;

(4) That his employment in the matter is not prohibited by the statutes cited in this paragraph.

d. Where the statements in such affidavit are negative and it does not otherwise appear that a violation of the policy or statutes set forth above is involved, representation will be permitted, and the affidavit will be filed with the papers in the case. Where it is clear that a violation of the policy or statutes set forth above is involved, representation will not be permitted, and the record will so indicate.

e. In any case where there is doubt as to whether representation should be permitted, detailed information concerning the activities of the representative in his former service connection and the subject matter of his representation will be obtained, and the matter will be submitted for consideration and decision to the Commanding General, Air Matériel Command, and, if considered advisable by that officer, to the Under Secretary of the Air Force.

4. *Retired Officers:*

a. A retired officer retains his status as an officer of the United States and may not engage in any activity incompatible with such status. Retired officers, not on active duty, are prohibited by 18 U. S. C. 198 (Section 109, Criminal Code) from aiding or assisting in the prosecution of claims against the Government. 18 U. S. C. 202 (Section 112, Criminal Code), prohibits retired officers, not on active duty, from procuring or aiding to procure Government contracts for another, and 18 U. S. C. 203 (Section 113, Criminal Code) prohibits retired officers from representing another in the sale of anything to the Department of the Air Force. In addition, the current Appropriation Act provides in substance that no payment shall be made from money appropriated in that act to any officer on the retired list of the Army who, for himself or for others, is engaged in the selling of, contracting for the sale of, or negotiating for the sale of, to the Department of the Air Force, any war materials or supplies.

b. The statutory plan is, generally, to prohibit retired officers from prosecuting claims against the Government and from directly participating in Government contract activities of the type described above. It is considered that the spirit of the statutes prohibiting participation in Government contract activities extends beyond any mere bargaining which may precede the execution of a contract or modification thereof, and includes, as well, any activity by a retired officer on behalf of a prospective contractor which reasonably and directly is aimed toward forming the basis for a contract with the Government. On the other

hand, it is not the intent of these statutes to preclude a retired officer from accepting employment in private industry solely because his employer is a contractor with the Government. Therefore, these statutes should not be construed as applicable to activities which are only remotely connected with claims or contractual matters as distinguished from direct participation in obtaining a contract with the Government on behalf of a prospective contractor.

c. In any case where the propriety of representation by retired officers is questionable, decision will be obtained in the manner specified in paragraph 3e.

5. *Reserve Officers and Members of the National Guard.* Reserve officers and members of the National Guard not on active duty come within the restrictions of this Regulation only if they qualify as former personnel as set forth in paragraph 1. They are not, by sole reason of their status as Reserve or National Guard officers, considered to be officers or employees of the United States, or persons holding any office of trust or profit or discharging any official function under or in connection with any department of the Government of the United States. Likewise, they are not subject to the restrictions applicable to retired officers outlined in paragraph 4.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

HOYT S. VANDENBERG
Chief of Staff, United States Air Force

OFFICIAL:
E. E. TORO
Colonel, USAF
Acting Air Adjutant General

DISTRIBUTION:
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CHANGE *AFR 30-30A
3-4

AIR FORCE REGULATION
No. 30-30A

DEPARTMENT OF THE AIR FORCE
WASHINGTON, *26 November 1948*

PERSONNEL

REPRESENTATIVE ACTIVITIES BY FORMER PERSONNEL, BOTH MILITARY AND CIVILIAN AND BY RETIRED OFFICERS

AFR 30-30, 18 June 1948, is changed as follows:

* * * * * * *

3. *Former Personnel, Both Military and Civilian:*

a. The provisions of 18 U. S. C. 284 (a) make it unlawful for former personnel, within two years after termination of their incumbency, to prosecute or act as counsel, attorney, or agent for prosecuting any claim against the United States which involves any subject matter directly connected with which the individual concerned was employed or performed duty.

* * * * * * *

4. *Retired Officers:*

a. A retired officer retains his status as an officer of the United States and may not engage in any activity incompatible with such status. Retired officers, not on active duty, are prohibited by 18 U. S. C. 283 from aiding or assisting in the prosecution of claims against the Government. 18 U. S. C. 216, prohibits retired officers, not on active duty, from procuring or aiding to procure Government contracts for another, and 18 U. S. C. 281 prohibits retired officers from representing another in the sale of anything to the Department of the Air Force. In addition, the current Appropriation Act provides in substance that no payment shall be made from money appropriated in that act to any officer on the retired list of the Army who, for himself or for others, is engaged in the selling of, con-

* This Regulation has been coordinated with and approved by the Chief, National Guard Bureau as being applicable to the Air National Guard.

tracting for the sale of, or negotiating for the sale of, to the Department of the Air Force, any war materials or supplies.

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BY ORDER OF THE SECRETARY OF THE AIR FORCE:

HOYT S. VANDENBERG
Chief of Staff, United States Air Force

OFFICIAL:
L. L. JUDGE
Colonel, USAF
Air Adjutant General

DISTRIBUTION:
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AFR 70–18
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AIR FORCE REGULATION
No. 70–18

DEPARTMENT OF THE AIR FORCE
WASHINGTON, *1 December 1950*

PROCUREMENT AND CONTRACTING

UNAUTHORIZED RELEASE OF PROCUREMENT INFORMATION

	Paragraph
Purpose	1
Policy	2
Responsibility	3

1. *Purpose.* This Regulation outlines Air Force policy prohibiting the advance release of procurement information.

2. *Policy.* Information concerning proposed procurements and purchases of supplies, including construction and maintenance projects, will not be released prior to the issuance of invitation for bids or requests for quotations. In the preparation of work project estimates, local contractors often render invaluable aid to Air Force base personnel in supplying information concerning local wage rates, material costs, and so forth. The Air Force does not intend that such contacts be curtailed. However, preliminary or approved project estimates will not be discussed with prospective contractors or made a matter of public knowledge until invitations for bids have been issued and bids received and opened, in the case of formal advertising, or after negotiations have begun when procurement by negotiation is authorized. This matter is particularly applicable to engineers and project estimators of Air Force installations or maintenance offices and purchasing and contracting personnel.

3. *Responsibility.* All Air Force military and civilian personnel have the individual responsibility for refraining from the release to individual business concerns or their representatives of any preknowledge that such personnel may possess concerning proposed procurements or purchases of supplies (including construction or maintenance projects) by any Air Force procuring activity. Such information will be released to all potential contractors as nearly as possible at the same time and only through duly designated agencies so that one potential contractor may not be given an unfair advantage over another. All dissemination of such information will be in accordance with existing authorized procedures and only in connection with the necessary and proper discharge of official duties.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

HOYT S. VVANDENBERG
Chief of Staff, United States Air Force

OFFICIAL:
L. L. JUDGE
Colonel, USAF
Air Adjutant General

DISTRIBUTION:
E; F

AIR FORCE LETTER No. 30-3

DEPARTMENT OF THE AIR FORCE
WASHINGTON, *19 December 1950*

PERSONNEL

RELATIONSHIPS OF AIR FORCE OFFICERS AND INDUSTRIAL REPRESENTATIVES

(Effective until 19 June 1952 unless sooner rescinded or superseded.)

	Paragraph
General	1
Policy	2
Expression of Opinions	3
Dissemination	4

1. *General.* It is essential that all Air Force officers whether in active status or on the retired list have a clear and complete understanding of their continuing responsibilities as officers of the United States Air Force. This is important particularly in regard to procurement matters or where the financial interests of business or industry are involved.

2. *Policy.* The ready exchange of proper information between Air Force representatives and representatives of the aeronautical industry is desirable, and constructive working relationships should be encouraged. There are, however, limits to what constitutes proper information.

3. *Expression of Opinions.* When an officer is assigned to the performance of a duty which calls for the formation of an opinion, that opinion is an official matter and is not solely the personal opinion of the officer concerned. Such duties are assigned for the purpose of developing opinions and providing recommendations based thereon to higher authority. Such recommendations should be conveyed only through official channels. Contrary opinions held by other persons in the same or higher echelons, based on a broader viewpoint or additional facts, may result in contrary final decisions. Accordingly, the prior statement by the officer concerned of his opinion to a contractor or prospective contractor not only will serve no useful purpose, but may mislead the contractor or prospective contractor. The assumption on the part of any officer that he can freely express personal opinions on subjects of official importance without having such statements associated with his official position as a representative of the Air Force is fundamentally unsound and may result in serious embarrassment to the Air Force and consequently to the officer concerned.

4. *Dissemination.* All officers of the Air Force will read this Letter and AFR 30-30. This Regulation cites laws pertinent to business relations between former personnel, both military and civilian, retired officers, and the Air Force.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

HOYT S. VANDENBERG
Chief of Staff, United States Air Force

OFFICIAL:

K. E. THIEBAUD
Colonel, USAF
Acting Air Adjutant General

DISTRIBUTION:
D

PROCUREMENT SCHEDULES AND PROGRAMING

General ASENSIO. I would like to take this opportunity to clarify one thing, sir. I believe Senator Ferguson inquired as to what established the timing on these particular contracts. It is really a little more involved than the explanation that was given.

Basically we develop a program, which is General Todd's responsibility as the assistant for programing in the office of the Deputy Chief of Staff for operations. That program has several schedules attached to it—aircraft procurement schedule, the unit activation schedule, and so forth and so on.

Taking into consideration the various lead times involved, the procurement dates become fixed, both lead times and distribution.

The procurement dates become fixed and the procurement must phase in with the over-all program.

Senator FERGUSON. Are you having difficulty getting your matériel because of any bottleneck?

Colonel REDD. Yes, sir; we have certain delays due to critical material shortages, but we are working on those cases and we are eliminating the bottlenecks.

Senator FERGUSON. What are the bottlenecks?

Colonel REDD. Aluminum, certain forgings that we have difficulty in getting, and steel has been a bottleneck; to a great extent, copper.

Senator O'MAHONEY. Why should steel be a bottleneck? We are producing more steel than ever before. We are producing more than the capacity of the steel mills, strangely enough, but that is easily explainable, technically. The distribution is made and the defense priority has a priority over all others. How do you develop a shortage in steel?

Colonel REDD. I don't know, sir, but a number of our contractors report difficulty in getting steel. There has been established what is known as the Aircraft Production Resources Agency which is a successor to what we had in the last war of the aircraft scheduling unit, which has as a primary mission to assist contractors in the Defense Department in acquiring these critical materials.

Senator FERGUSON. Are machine tools a bottleneck?

Colonel REDD. Machine tools today; yes, sir; they are a bottleneck. It has been and appears that it will continue to be for some months to come.

Senator FERGUSON. Who would know the figure, in dollars, that we could anticipate could not be purchased in the coming year, according to your budget because of these bottlenecks?

General ASENSIO. Sir, these bottlenecks have been taken into consideration in development of the program. There are certain areas where we might have a temporary bottleneck that was not anticipated by virtue of requiring a certain type of alloy or something of that nature.

The program is so large that all of those features cannot possibly be anticipated before we really get into the program down to the last detail.

Senator FERGUSON. Did you spend, last month, all the money that you had budgeted to spend last month?

General ASENSIO. Yes, sir; by and large we did.

Senator FERGUSON. By and large. We are dealing in billions here. Will you get for the committee the figures that you had budgeted and the amount that you actually had produced in that month?

General ASENSIO. Sir, we did not budget on the basis of a month-to-month expenditure. It was on the basis of an over-all program.

Senator FERGUSON. But you must have a monthly idea of what you anticipated to be produced in the month of July, the month of June.

Mr. JACKSON. Sir, I think I can answer that on this appropriation. We had anticipated obligating approximately $1,600,000,000 in July under the resolution. That was all obligated during July, every bit of it.

Senator O'MAHONEY. We are talking about expenditures, not obligations.

Senator FERGUSON. Not contracts. You do not show bottlenecks up in contract authority.

General ASENSIO. Yes, sir. We do have an expenditure forecast.

As to that, however, it is some time before we get the reflection for July. I am not sure that—in fact I am sure that the July report is not yet available.

Senator FERGUSON. I am thinking of my mail from Michigan, in regard to the bottlenecks that are in existence in production.

General ASENSIO. Yes, sir.

We should be very happy to furnish that figure, sir. It is not yet available. As soon as it does become available we will furnish it to the committee.

(The information referred to was furnished to the committee.)

COMPARISON OF PROCUREMENT PERSONNEL

Senator O'MAHONEY. Now will you please proceed with your comparison of World War II with fiscal year 1952 personnel?

Colonel REDD. During World War II we had approximately 82 percent of the procurement program and we are only asking for approximately 46 percent of the personnel requirements.

The requirement of this 12,000 man-years requested is broken down into the three requirements: Requirement for the Air Matériel Command, requirement for industrial auditing, and the requirement for contract renegotiation.

AIR MATÉRIEL COMMAND

First we will discuss the Air Matériel Command requirement. The procurement and production function of the Air Matériel Command is organized on the basis of centralized procurement and decentralized contract administration.

In other words, the prime mission of personnel at the Air Matériel Command is to place contracts. Personnel in the field are to administer these contracts after they are placed. That includes approval of cost of reimbursement, inspection and acceptance of the items for the Government, and maintaining a continuous follow-up to see that the items are delivered when required.

CONTRACT WORKLOAD

In connection with that, to give you an indication of the workload that was out in the districts as of the end of this past fiscal year, on June 30 there existed 11,802 prime contracts that were active and in operation, that our people were administering, with a noninvoice dollar balance of $6,177,000,000.

In addition to that workload there existed 79,800 subcontracts requiring inspection at source of production; in 4,565 plants, by the way.

Senator FERGUSON. Does industry do the same thing that you do in their subcontracts?

Colonel REDD. Yes, sir. They follow their subcontracts, expedite them.

Senator FERGUSON. Have you ever compared the personnel that you have in relation to yours, for instance, with that of General Motors?

Colonel REDD. No, sir, we have never made that comparison.

Senator FERGUSON. Do you not think it would be well to have somebody compare it with civilian work?

Colonel REDD. We have compared our operating costs for an overall procurement program. It compares very favorably with industry.

Industry has a number of times expressed more or less commendation on the manner in which we handled our procurement program.

INSPECTION PROGRAM

We had this inspection in 4,565 plants and we are dealing today with 2,916 prime contractors and 2,985 subcontractors. During the month of June our finance officers processed $302,000,000 worth of vouchers to the contractors.

Senator O'MAHONEY. Observe on page 47 in the justification, you say in the second paragraph under "Field quality control:"

> Although the Air Force quality-control system is based on supervision of contractors' quality-control departments, the policy of spreading procurement among as many small businesses as possible results in a greatly increased workload of reviewing and recommending changes in contractors' systems.

Does it also result in the greater distribution of contracts among small contractors?

Colonel REDD. Yes, sir. That requires an increase in personnel because we have distributed the contracts over a wider area into the small contractors' plants. Our number of plants has gone up very rapidly during this past fiscal year, as to those with whom we did business.

Senator FERGUSON. Of course your total went up, too.

Colonel REDD. Yes, sir.

Senator FERGUSON. How does your number compare to the total expenditures, in percentages? You have such a great increase in the amount of money you are spending. You say that the number of contractors has gone up. What is the percentage in the dollars and the percentage in the increase in number of contractors?

Senator O'MAHONEY. He probably has those figures right there.

First give us the increase in number of contracts. I see you have a chart there.

PRIME CONTRACTS

Colonel REDD. Increase in number of our prime contracts was about 6,000.

Senator O'MAHONEY. From what to what?

Colonel REDD. From last July, when we had approximately 6,000 prime contracts, now we have 11,806.

Senator O'MAHONEY. What is the date by now?

Colonel REDD. As of June 30, 1951.

Senator O'MAHONEY. That number was what?

Colonel REDD. Up to 11,806. It went from approximately 6,000.

Senator O'MAHONEY. Those are prime contracts?

Colonel REDD. Yes, sir.

Senator FERGUSON. What dates are you using?

Colonel REDD. I am using from July 1, 1950. In other words, I am using the beginning of the fiscal year, taking the fiscal year for 1951, the beginning and the end.

The subcontracts—and this also includes prime—the subcontracts and prime contracts requiring source inspection went from approximately 39,000 to approximately 91,000.

Senator O'MAHONEY. So the percentage of increase was much greater among the subcontracts than among the prime contracts?

Colonel REDD. Yes, sir.

Senator O'MAHONEY. Is that system working efficiently?

Colonel REDD. Yes, sir.

Senator FERGUSON. I am not clear on your 39 and 91. Those include the 6 and the 11?

Colonel REDD. Yes, sir.

They require an inspection at source of production. We can eliminate, take out the 11,000 primes, and we can come up with the picture of 70.

Senator FERGUSON. What is the percentage on your chart?

Colonel REDD. I haven't it expressed in percentage form.

Senator FERGUSON. How much more money were you spending at the end than at the beginning?

Colonel REDD. Probably——

Senator FERGUSON. I do not want probably.

OBLIGATED FUNDS

Colonel REDD. I would say about 4 to 1. In other words, the obligations—I can give it to you in this manner—the obligations as of June 30 were $8,795,000,000 for fiscal year 1951, as of the end of June 30.

For 1950, the previous fiscal year, it was $2,000,000,000.

Senator FERGUSON. About 4 to 1?

Colonel REDD. Yes, sir, approximately.

Senator FERGUSON. Your contracts have doubled?

Colonel REDD. Yes, sir.

Senator O'MAHONEY. Now with respect to the efficiency of the end product, has that increased?

Colonel REDD. Our quality has not decreased. If anything our quality has improved.

Senator O'MAHONEY. Have you any idea of how much increased civilian personnel is made necessary by the requirement to inspect this 4 to 1 increase of contracts? Prime and sub.

Colonel REDD. The increase in personnel, for 1950 for inspection we used 1,468 man-years, and for 1952 it will require approximately 4,400 man-years. So the ratio is about 3 to 1.

Senator O'MAHONEY. If we ask you to take care of small business we must necessarily provide you with the personnel to do the job.

Colonel REDD. That is right.

Senator HILL. Have you any idea at all how the matter of subcontractors for this first year of the defense build-up since Korea compares with the first year of the build-up from 1940 to 1941?

Colonel REDD. No, sir; I don't have the figures.

Senator HILL. Have you any idea? Do you think the spread is better or not? Or do you not know?

Colonel REDD. I do not know, sir.

Senator HILL. Thank you, sir.

AIR PROCUREMENT DISTRICTS

Colonel REDD. In connection with some of these guards that we have set up, we have the Procurement Committee at Headquarters Air Matériel Command review these contracts before they are reviewed and signed by the Director. In our procurement districts we have our contracting officers administering this contract, watching the money that the contractor spends, and during fiscal year 1951 we saved $70,000,000 be reviewing cost proposals submitted by the prime contractor and subcontractor.

The Air Procurement District, we have established six of them, one in the Northeastern Air Procurement District, with headquarters at Boston, covering the territory indicated in blue.

The Eastern Air Procurement District with headquarters in New York, indicated in red.

The Central Air Procurement District, with headquarters in Detroit, illustrated in gray.

The Mid-Central Air Procurement District with headquarters in Chicago, indicated in green.

The Southern Air Procurement District, with headquarters in Fort Worth, indicated in yellow.

And the Western Air Procurement District with headquarters in Los Angeles, indicated in orange.

This territory is broken down into 23 regional offices, as illustrated by the white dots. Then we have 23 large plant residences, where we have a full component of personnel, including a contracting officer, quality control, and property people.

Under these regional offices they go into the smaller plants and take care of the inspection and the contract administration in the smaller plants.

The workload that these people have to accomplish really results from two things: (1) it results from the current procurement that we are going to buy this year, and (2) it results from the contracts that were placed in 1949, 1950, and 1951, and that are still active out there, of which there are 11,000 of them, with an unexpended balance of over $6 billion.

As to the two workload factors used to determine these personnel requirements, we used a factor for the headquarters personnel, procurement production at headquarters. We used for that the actual procurement people, the number of contracts, purchase orders, change orders and supplemental agreements required to be written to accomplish the program.

Then for the production personnel handling Government-furnished property, and in the procurement and production and quality-control personnel in the districts, we used the workload from the average active prime contracts that were in operation.

This brings about a cumulative workload from prior years, which I have illustrated on the next chart, sir.

DISTRICT HEADQUARTERS

Senator O'MAHONEY. How many district headquarters are there?

Colonel REDD. Six—Boston, New York, Chicago, Fort Worth, Los Angeles, and Detroit; and 23 regional offices.

The regional offices carry out the operation. And the district the staff and management.

Then we have 23 large-plant residences where our personnel carry out the operation.

Senator HILL. The regional offices are in white?

Colonel REDD. Yes, sir.

Senator O'MAHONEY. Let us have the next chart.

Colonel REDD. Since these contracts have this carry-over from prior years, and we have, by analyzing our records from 1946 to 1950, determined the pattern of this carry-over, you will notice that under fiscal year 1952 about two-thirds of the workload results from prior procurement, not from fiscal 1952 funds represented in blue, and the orange and green colors.

The balance of the workload results from contracts to be placed out of 1952 funds.

Senator O'MAHONEY. The lead time on the items to be procured is of tremendous importance in determining what the rate of expenditures will be.

Colonel REDD. Yes.

Senator O'MAHONEY. General Asensio will recall that that is one of the major questions which I think ought to be cleared up for this committee for all of the procurement, because you have dollars in this bill for each service which cannot possibly be expended within fiscal 1952.

General ASENSIO. Yes, sir. You have in effect asked for that by requesting a break as to what could be reflected in contract authority.

Senator O'MAHONEY. Yes. I want it to be clearly understood that you know what I am talking about.

General ASENSIO. We are preparing that information.

INSPECTION OF SUBCONTRACTS

Colonel REDD. In addition to the workload that these personnel have as a result of these prime contracts, it is estimated that they will have to administer and inspect at least 100,000 subcontracts during fiscal year 1952 that call for inspection at source of production.

Senator FERGUSON. Fiscal what?

PERSONNEL REQUIREMENTS

Colonel REDD. 1952—74 percent of the personnel requirement for fiscal year 1952 was computed by utilizing these two workload factors based on experience during fiscal year 1950 and applied to the projected workload for fiscal year 1952. The remaining 26 percent consisting of 180 man-years for administration at Headquarters, Air Matériel Command, Dayton, Ohio, 1,666 man-years for service personnel in the air procurement districts, 797 man-years for production

resources, and 100 man-years for the machine-tool program, was determined—

(1) Administration personnel at Headquarters, Air Matériel Command, 10 percent of other personnel at Headquarters, Air Matériel Command;

(2) Service personnel in the air procurement districts, by analysis of new functions transferred from Headquarters, Air Matériel Command, to the districts;

(3) Production resources personnel, by transferring 797 man-years from budget program 180; and

(4) 100 man-years for the new function of machine-tool program, resulting in a requirement of 10,724 man-years, or 9,580 positions at the beginning of the year and 10,858 positions at the end of the year.

INDUSTRIAL AUDITING PROGRAM

The second function to be discussed is that of industrial auditing shown on pages 48 and 49. The Industrial Audit Division of the Auditor General, DCS/Comptroller, audits and surveys the accounts and records of contractors pertaining to procurement contracts and also audits industrial property accounts. These functions are directly related to Air Force procurement activities. This audit activity requires 1,133 man-years for fiscal year 1952.

Senator O'MAHONEY. Do you have any reports in your office of actual savings that are accomplished by reason of these industrial audits?

Colonel REDD. Yes, sir. The Auditor General advises that during fiscal year 1951 it is estimated that approximately $100,000,000 was saved.

Senator O'MAHONEY. By these audits?

Colonel REDD. Yes, sir.

Senator O'MAHONEY. In what way was this saving accomplished?

Colonel REDD. I have Mr. Thomas here from the Auditor General's office who is more familiar with that.

Senator O'MAHONEY. This is a chance to do a little boasting. I hope you do not miss it.

AUDIT PROCEDURE

Mr. THOMAS. I am Mr. Thomas of the Auditor General's office. We have a system in our auditing of keeping time records on every audit report we perform. We also start our audit from the contractor's cost statement.

If this is on a price redetermination contract particularly, 30 percent of the contract has to be renegotiated on the price of the contract. So we audit up to that point.

The contractor submits his costs, which we audit. We submit an audit report to the contracting officer.

Senator O'MAHONEY. When the contractor submits his cost does he do it by way of submitting his books, or submitting a separate statement?

Mr. THOMAS. He submits a separate statement to the contracting officer as a basis of negotiation of a new price.

Senator O'MAHONEY. Do you check his books?

Mr. THOMAS. We have a copy and we check his books.

Senator FERGUSON. With the statement?

Mr. THOMAS. We start with the statement and check his books and the statement.

Senator O'MAHONEY. You check the statement against the books?

Mr. THOMAS. Yes, sir. We audit his books to see that his books are in accordance with our ideas of allowable costs. We recommend to the contracting officers in most instances certain items which should not be allowed.

Senator FERGUSON. What are the items you do not allow that you find in these audits?

ALLOWABLE EXPENSES

Mr. THOMAS. We have a section 15 of the Armed Services Procurement Regulations which outlines what are allowable and what are not allowable.

Senator O'MAHONEY. Give us some examples.

Mr. THOMAS. Unallowable costs are interest, advertising, contributions, certain forms of insurance which may or may not be allowed.

Senator O'MAHONEY. Entertainment?

Mr. THOMAS. Entertainment is definitely disallowed.

Senator HILL. What about time and expense spent in getting the contract?

Mr. THOMAS. That has to be reviewed. The auditor reviews it first. He passes his ideas or recommendations on to the contracting officer. Then it is a matter of negotiation, a matter of meeting of the minds.

In some instances that kind of expense can be a fair expense. Other times it is not allowed.

Senator O'MAHONEY. The statement was made by Colonel Redd, I believe, that the auditor's report was to the effect that $100,000,000 had been saved. Can you give us a picture of the saving, what it consisted of?

Senator FERGUSON. And what items did you catch in the saving?

Mr. THOMAS. There are all kinds of items. On various audits they pretty well cover the field.

First we must take two kinds of audits, or two kinds of contracts: the cost-type—CPFF—and fixed price with a price redetermination clause. Under the cost-type contracts we have a group of auditors in the plant.

They audit the contractor's claims as they are presented. They confer with the contractor when he submits a claim and ask him to take that claim back and readjust it, if certain items appear disallowable. If he insists, which is his prerogative, we disallow the items.

SAVINGS

Under those CPFF claims, our statistics show that we have an over-all savings of approximately 1 percent. It is not indicative of what we save in the aggregate because there are many millions which he automatically withholds on his claim because he knows the auditor will not pass it.

After attempting to claim certain types of expenses on one, two or three occasions, from there on he refrains.

Senator O'MAHONEY. Give us some specific examples of types of expense claimed by contractors which were disallowed, with the resulting saving, approximately.

I know you do not have your books here. But you do know what the general picture is.

Mr. THOMAS. Entertainment is one.

Senator FERGUSON. How do they try to disguise entertainment?

Mr. THOMAS. By including it in travel expenses, and we analyze the accounts.

Senator FERGUSON. You fellows must know pretty well how much it costs to travel.

Mr. THOMAS. We know. If there are any items of travel which our auditor feels are high, he discusses the matter with the administrative contracting officer. Then they come to agreement that it is too high.

In fact in most plants they have a maximum that they will allow for travel. They have a mutual agreement that they will not charge over and above a certain amount per day for their employees.

Senator FERGUSON. How much more do they allow than Government?

Mr. THOMAS. About a year ago there were several instances where some contractors only allowed $8 a day. That was when the Government was allowing $6. Since then the Government has allowed $9 a day.

It depends on whether they are executive personnel.

Senator FERGUSON. You must know some of the items. What are they allowing for travel?

Mr. THOMAS. They allow about $12.50 for an executive per day, plus, of course, all train fare or car allowances.

Senator HILL. That $12.50 means hotel room, too?

Mr. THOMAS. Hotel room and food. That is for junior executives, and so forth. It has been pretty much of a standard allowance.

Senator FERGUSON. How do they list the suites that they have in hotels down here, where they keep a suite all the time for entertainment, and so forth?

Mr. THOMAS. That could be included in their selling expenses, which are very closely scrutinized. That is one of the forms of expenses we disallow. We only allow such selling expenses as they can definitely show, or they can definitely prove, are allocable to the performance of the contract.

We have to be careful to scrutinize selling expenses to differentiate between their commercial work and our Government contracts, which is very carefully done.

Senator O'MAHONEY. The other items?

Mr. THOMAS. Administrative items. I mentioned entertainment and contributions. Of course we disallow interest.

RESEARCH AND DEVELOPMENT INSPECTED

Another factor we have to scrutinize, and often disallow, is experimentation, research and development, which is more applicable or quite possibly wholly applicable to their commercial operations. That is an item we have to screen very carefully.

Senator O'MAHONEY. Would it be proper to draw the conclusion from what has been said here that these audits during a given period—I suppose it was during a year—have resulted in cutting off improper claims to the amount of $100,000,000?

Mr. THOMAS. I would reiterate that it has, in my opinion, definitely saved the Government $100,000,000.

Senator FERGUSON. Have you these figures in any form? As to how much you allowed each contractor?

Mr. THOMAS. We have a report, a form attached to each audit report which discloses the difference between what we recommend to the contracting officer and what the contractor claims. We can tabulate this. We do, to get this statistical information.

Senator O'MAHONEY. Please provide a summary of that for the record.

Mr. THOMAS. All right, sir.

(The information referred to is as follows:)

II. In the initial conference with a contractor who has entered into a supply contract with the United States Air Force, the contractor's accounting system is reviewed and he is informed by the Air Force auditor of the various types of expenses which ordinarily would not be approved as part of contract costs. As a result some contractors refrain from including such costs in their claims.

Notwithstanding previous advice that certain costs will not be approved for allocation to Government contracts, some contractors continue to include them in their cost presentations. Such items are disallowed by the auditor or recommended to the contracting officer for disallowance. Following this action, in connection with subsequent cost presentations, with the knowledge that the auditor will detect unallowable items if claimed, the contractor eventually refrains from claiming knowledgeably unallowable items of cost.

Additionally, in many cases where a mutual understanding is established between the contractor and the Air Force auditor, the propriety and admissibility of many items of cost are informally discussed and result in elimination of a great number of such items without formal action by the auditor. No record is maintained of the amounts so eliminated, but in the opinion of field auditors they aggregate more dollars each year than are formally disallowed.

Costs formally disallowed and recommended to the Air Force administrative contracting officer for disallowance or for consideration when negotiating a price change with the contractor, as reported by district audit offices for fiscal year 1951, aggregated $93,863,193 as summarized below:

Direct labor	$3, 860, 548
Direct material	19, 975, 593
Manufacturing overhead expense	57, 890, 158
Engineering overhead expense	26, 982, 259
General and administrative overhead expense	3, 962, 740
Travel and entertainment expense	919, 979
Recommended reduction in profits due to audit adjustments of contractor's projected costs	4, 555, 916
Total	93, 863, 193

The amounts of manufacturing overhead expense, engineering overhead expense, and general and administrative overhead expense to which the Air Force auditors took exception cannot be readily segregated into an itemized list of expense classifications because the determination of the allocability to Air Force contracts of contractor's over-all business expenditures is computed by total overhead percentage formulas applicable to direct labor and/or material.

The aggregate of overhead expenses disallowed are based upon a combination of (*a*) the amounts determined by application of the basic overhead formulas to disallowed amounts of direct labor and/or material and, (*b*) the adjustment of specific over-all expense items in their application and amount allocable to that portion of the contractor's operations reflected by Air Force contracts.

ENTERTAINMENT EXPENSES DISALLOWED

Senator O'MAHONEY. Now as to entertainment. I want to be clear for the record, since it has been mentioned, precisely what you mean by entertainment. Do you mean entertainment of Government officials?

Mr. THOMAS. That means, sir, anything over and above the cost of the hotel room and three meals a day at a reasonable cost per meal. Everything in excess of that.

Senator O'MAHONEY. For employees of the contractor?

Mr. THOMAS. For employees of the contractor.

Senator O'MAHONEY. And meals for others——

Mr. THOMAS. Are excluded.

Senator O'MAHONEY. They are not included?

Mr. THOMAS. No, sir. That is our method of determining what is excessive.

Senator O'MAHONEY. You saw the report in the papers the other day that another committee of Congress had received some testimony to the effect that employees of another branch of the military service, civilian employees, were entertained most lavishly in the city of New York.

Have you ever run across anything of that kind?

Mr. THOMAS. Not personally.

Senator O'MAHONEY. In this $100,000,000 of saving, have you disallowed any such things?

Mr. THOMAS. I would say that in practically every contract we disallow so much. That would be just a natural thing for an auditor to do, to eliminate anything over and above the actual costs.

Senator O'MAHONEY. Now you are talking in generalities. I am trying to be specific. What I want to know is have you had any evidence of any attempt on the part of any contractor to entertain the civilian or military personnel of the Air Force?

Mr. THOMAS. I have no knowledge myself, sir. I would have to inquire to answer that question.

Senator O'MAHONEY. You have no personal knowledge?

Mr. THOMAS. The operations are all in the district.

Senator FERGUSON. Then you are just talking about generalities as a supervisor? These would not come to your attention? They are in the district?

Mr. THOMAS. They are at the district level. They would come to the attention of the Washington office only if they were really bad cases.

INVESTIGATION OF AUDIT REPORTS

Senator FERGUSON. Would he inquire? Suppose he found $350, a bill from New York from a contractor, and he would say that he will disallow that because it looks like entertainment.

Would he go in to ask "Whom did you entertain"?

Mr. THOMAS. He would report that to the contracting officer administering the contract. It would be up to the contracting officer to do that investigating.

Senator FERGUSON. Would he?

Mr. THOMAS. Yes, sir.

Senator FERGUSON. Or would he say "I am not going to allow that item"?

Mr. THOMAS. He would not only not allow it, but he would take it up with the contracting officer, who is the final authority for approving the voucher.

Colonel REDD. The contracting officer would require the contractor to give him a detailed itemization of that bill. Any item in there that appeared unreasonable or irregular, would not be approved for reimbursement.

Senator FERGUSON. So no entertainment is allowed?

Mr. THOMAS. No entertainment is allowed. On the very large corporations it is difficult to analyze for a whole year their whole expenses. We may take it on a 3- or 4-month basis, and work a percentage from that 4 percent and reduce the expenses by that amount.

Senator O'MAHONEY. When you are talking about savings by the auditors, I assume that you mean savings on all contracts throughout the country, in the District and in the field, too.

Mr. THOMAS. That is right, sir. The entire contract at large.

Senator O'MAHONEY. So you didn't want to leave any implication that there is some open door here by which entertainment in the District of Columbia was not covered by your audit?

Mr. THOMAS. No, sir. That is all-inclusive of all kinds of savings.

Senator FERGUSON. But it is audited by the man in the field?

Mr. THOMAS. Yes, sir.

Senator FERGUSON. For instance, if he came from Detroit and did his entertaining in Washington, is it audited in Detroit?

Mr. THOMAS. The charge appears on the books at the Detroit office and would be audited there.

Senator O'MAHONEY. In other words, the contractor could not separate his claims?

Mr. THOMAS. No, sir.

Senator O'MAHONEY. A single claim is filed for all of the allowances that he wants?

Mr. THOMAS. Those claims are included as a part of his overhead expenses. They are allocated on a percentage basis. We have to audit his books, not a specific claim. We audit his books in their entirety for those classes of expenses and segregate those items we feel are not allowable.

Senator O'MAHONEY. Please supply the committee for inclusion in the record at this point a complete list of the items which are disallowable under your procedure.

Mr. THOMAS. Yes, sir.

Senator O'MAHONEY. And a summary statement of what these savings are, as you have computed them.

Mr. THOMAS. The kinds of expenses; yes, sir.

(The information referred to is as follows:)

STATEMENT OF DISALLOWABLE COSTS

General instructions to the Air Force industrial audit personnel in connection with unallowable contract costs have been extracted from section XV, Contract Cost Principles, Armed Services Procurement Regulation.

The total cost of a cost reimbursement type contract is the sum of the allowable direct costs incident to the performance of the contract, plus properly allocable portions of allowable indirect costs, less applicable income and other credits. The tests used in determining the allowability of costs also include, (i) reasonableness, (ii) application of generally accepted accounting principles and practices,

and (iii) any limitations as to types or amounts of cost items set forth in part 2, section XV, or otherwise included in the contract. Failure to list any item of cost in this part is not intended to imply that it is either allowable or not allowable. The use of normal or standard costs (with appropriate adjustments for variances, unallowable costs, and the other provisions of this part) is acceptable in determining amounts of provisional or interim payments, but final allowable costs must represent actual costs. Income and other credits arising out of operations under the contract, where the related cost was reimbursed or accepted as an allowable cost, will be credited to the Government.

EXAMPLES OF ITEMS OF UNALLOWABLE COSTS

Irrespective of whether the particular costs are treated by the contractors as direct or indirect, the following items of costs are considered unallowable:

(*a*) Advertising, except help-wanted advertising, and advertising in trade and technical journals.

(*b*) Amortization or depreciation of (i) unrealized appreciation of values of assets, or (ii) assets fully amortized or depreciated on the contractor's books of account.

(*c*) Bad debts (including expenses of collection) and reserves for such debts.

(*d*) Commissions and bonuses (under whatever name) in connection with obtaining or negotiating for a Government contract.

(*e*) Contingency reserves.

(*f*) Contributions and donations.

(*g*) Dividend payments.

(*h*) Entertainment.

(*i*) Federal taxes on income and excess profits.

(*j*) General research, unless specifically provided for elsewhere in the contract.

(*k*) Interest on borrowings (however represented), bond discount and expenses, and financing charges.

(*l*) Legal, accounting, and consulting services and related expenses incurred in connection with organization or reorganization, prosecution of patent infringement litigation, defense of anti-trust suits, and the prosecution of claims against the United States.

(*m*) Losses from sales or exchanges of capital assets, including investments.

(*n*) Losses on other contracts.

(*o*) Maintenance, depreciation and other costs incidental to excess facilities (including machinery and equipment) other than reasonable standby facilities.

(*p*) Premiums for insurance on the lives of directors, officers, proprietors or other persons, where the contractor is the beneficiary directly or indirectly.

(*q*) Selling and distribution activities not related to the contract products.

(*r*) Taxes and expenses in connection with financing, refinancing, or refunding operations, including the listing of securities on exchanges.

Senator O'MAHONEY. Will you state your name and position for the record?

Mr. THOMAS. I am A. B. Thomas, of the Auditor General's office, Air Force.

Senator O'MAHONEY. How long have you been with the Air Force?

Mr. THOMAS. Since 1942.

Senator O'MAHONEY. So you have had a lot of experience?

Mr. THOMAS. Yes, sir. I was in public accounting before that.

Senator O'MAHONEY. Are you a CPA?

Mr. THOMAS. A Michigan CPA for the last 20 years.

Senator FERGUSON. Where do you come from in Michigan?

Mr. THOMAS. Detroit. I was with Haskins & Sells for about 14 years.

Senator O'MAHONEY. Thank you very much, Mr. Thomas.

Colonel REDD. The third and last personnel requirement to be discussed is that of contract renegotiation shown on page 49. Under this program 143 man-years are requested to carry out this function.

RENEGOTIATION OF DEFENSE CONTRACTS

The Air Force Division of the Armed Forces' Renegotiation Board conducts renegotiations with contractors and subcontractors under the statutory authority of section III of Public Law 547 (the Renegotiation Act of 1948) and its subsequent extensions.

The Renegotiation Act of 1948 has for its general objectives the following:

(*a*) To eliminate profits which are purely excessive in view of the pertinent facts and circumstances of the contractors' business.

(*b*) To provide a substitute for competitive pressures on prices and costs.

(*c*) To induce reductions in prices and costs.

(*d*) To encourage prompt adjustment to a reasonable price when production experience indicates the original price basis was unreasonably high.

The requirement is computed as follows: It is estimated that 900 cases will be cleared during fiscal 1952.

Senator O'MAHONEY. How many?

PERSONNEL

Colonel REDD. Nine hundred. It is estimated that 1 professional staff member can handle 13 cases, which results in a requirement of 70 professional staff members and the other 73 as estimated from past experience, making a total of 143.

Senator O'MAHONEY. On page 53, Colonel Redd, I saw the statement that the average number of contracts handled per man-year in procurement and production is 1.15. That means all of your contracts, your primes and your subcontracts and the rest of it?

Colonel REDD. No, sir. That would be the prime contracts. It is estimated that there would be 13,222 active prime contracts and they would be handled by 12,000 man-years. However, since this budget was prepared and later information has been made available through the close-out of fiscal year 1951, it indicates that we will have approximately 17,000 prime contracts for 1952.

RENEGOTIATION ADMINISTRATIVE COSTS

The fund requirement for other operating costs referred to on pages 51, 52, and 53 of the budget which you have before you are listed on chart No. 4, and total $3,834,000. They are broken down as follows:

The sum of $1,499,000 required for temporary duty travel of military and civilian personnel, and permanent change of station travel for civilian personnel. This travel is——

Senator FERGUSON. Have you any check system on travel?

Colonel REDD. Yes, sir. Each section chief or operating agency is first of all required to submit by quarters his travel fund requirement. He has to submit his justification of that. That is analyzed.

If that is approved, then he is held within that. We require him to keep a detailed cost of each trip broken down between per diem and transportation for the record. Travel orders are only signed in the district headquarters and in the Headquarters Air Matériel Com-

mand Directorate, at one central point, in the administration office at these administrative Headquarters Air Matériel Command.

That is one of their functions. They approve the travel and review. In the districts it is either approved by the district commander himself or his executive officer.

Senator O'MAHONEY. I was about to ask if the approving officer carried weight enough to reject a travel request.

Colonel REDD. Yes, sir. We have insisted on that. We have on our field survey trips looked into and discussed it with the district commanders. Most of them keep a running record in their own office on it so they can know from day to day just where they stand.

Senator O'MAHONEY. Are there directives governing the issuance of travel orders?

Colonel REDD. Yes, sir. And the directive simply states that it will be the duty of the supervisor or the man who approves the request for travel that the travel is necessary to carry out this procurement program.

It is usually broken down to the sectional level at headquarters where they approved the request. They are closer to the scene and they know whether they can justify the travel.

1951 TRAVEL COSTS

Senator O'MAHONEY. That travel is considerably more than one-third of the total sum for operating costs. Is that excessive?

Colonel REDD. No, sir. During this past fiscal year, 1951, we spent $1,115,000 in travel. We do not think that that figure is excessive. We feel that we will probably require that much.

PERSONNEL

Senator THYE. Colonel, are all these men stationed here in Washington?

Colonel REDD. No, sir. Just about 56 people are stationed in Washington—2,296 are stationed at Headquarters, Air Matériel Command. Then the balance are stationed out in——

Senator THYE. I am speaking of the auditors. Are you off the budget making for the travel of auditors——

Colonel REDD. This covers all personnel.

Senator THYE. That is what I thought. That is the reason I asked the question relating to the auditors. Are they stationed in Washington or stationed geographically across the Nation?

Colonel REDD. They are stationed across the Nation. They have headquarters in Philadelphia. They are in each of the procurement districts except the northeastern district, where they have a district office.

The northeastern district is handled out of their New York district office. They have people located, however, out in large facilities in each one of these districts.

Then in the southern district they have an office located at Fort Worth, and also Atlanta, because they have to do some military auditing in that vicinity. So they are at or near the source of production.

Senator THYE. I wondered whether you had made a recent study to determine how you might locate that geographically across the Nation so as to eliminate the excessive travel necessary to have a man travel, for instance, from Philadelphia across to the Central West, or into the Southwest. That travel seems quite excessive.

I am wondering how you could proceed to bring about economy in that travel expense.

TRAVEL ACTIVITIES

General ASENSIO. The big thing here, Senator Thye, is that we have to get a balance between our administrative offices that are set up and the travel to be performed. We have tried to adjust this in the most economical manner because it is a question of one or the other to do the job.

By holding the district offices and the other field offices in that economical balance there is a considerable requirement for travel. Were we to reduce that we would more than compensate in the requirement for stationing additional people in the field, in the additional man-years.

Senator THYE. When a man is traveling he is not auditing. When a man is traveling he is not performing any service for the Government. Traveling is an expense to the Government. The more you travel the less service you get out of the individual, and the greater the expense for the maintenance of that individual.

That is one reason why it would seem to me highly desirable to try to geographically establish the men that are doing this work so that it is not necessary for them to spend so much of their daily time in travel and in the expense involved.

General ASENSIO. This does represent a balanced consideration. Some of the field areas that do have to be covered are not so involved industrially as to justify the establishment of the field office. That is a kind of consideration that we are up against, in this. We are always cognizant of the desire to hold travel to a minimum for the reasons that you have stated.

That certainly looms large in any consideration of ours. This we think represents the minimum that will allow a satisfactory performance of our job.

I hestiate to say "satisfactory" because we hope that it will be a superior performance.

Senator O'MAHONEY. I am glad Senator Thye made that comment, but after all, manpower is one of the essential assets of the United States which must be concerned because the populations of other countries which might be involved in war is so much greater than this country.

Colonel REDD. Also, we have opened up subplant offices in the regional offices so our people will not have to go so far.

COMMUNICATION SERVICES

The next item on the budget is $552,000 for communication services. That will pay for the commercial communication services, including local and long-distance telephone calls, commercial teletype and telegram, at Headquarters, Air Matériel Command, and all the

communications services including postage in the Air procurement districts.

Senator O'MAHONEY. Do you have regulations to hold that expenditure down?

Colonel REDD. Yes, sir. We control the long-distance telephone calls by giving each operating agency that has authority to make calls an account number and giving them a limited number of calls to make during this month.

Senator FERGUSON. Is there a limitation on the length of time?

Colonel REDD. Yes, sir. They have a limitation approximately. I think now we have settled for 20 minutes on the airframe when they are discussing an airframe contract, or a big complex contract. We keep reiterating the fact that they must keep the money down because we are limited both ways. We are limited by the number of calls that we can make and we are limited by the dollars that we have to spend for it.

So by that dual control we effect control.

Senator O'MAHONEY. Who effects the control? You say "we are limited."

Colonel REDD. Our Directorate.

Senator O'MAHONEY. You mean the Air Force imposes this limitation.

Colonel REDD. The commanding general of the Air Matériel Command imposes it on our directorate.

Senator O'MAHONEY. Proceed.

RENTAL OF OFFICE SPACE

Colonel REDD. An amount of $636,000 is required to pay for rent of office space and cost of utilities in the air procurement districts, and garage space for vehicles, and rental on International Business Machines that we use for machine accounting.

CONTRACTUAL SERVICES

The sum of $659,000 is required for contractual services to provide funds to pay for repairs to Government-owned vehicles, office machines, office furniture, and for packing and crating charges incident to moving office furniture and equipment, and other miscellaneous contractual services. It is not economical or practical to have these services performed at military shops.

SUPPLIES AND MATERIALS

Supplies and materials: An amount of $136,000 is required to cover the cost of gasoline, oil, and other items required to operate Government-owned vehicles in the Air procurement districts, and for miscellaneous supplies and materials not normally available through regular supply channels.

SOCIAL-SECURITY PAYMENTS

The sum of $352,000 is required for social security for Public Law 734, Eighty-first Congress.

Gentlemen, that concludes my presentation.

ELIMINATION OF EXCESSIVE PROFITS

Senator HILL. May I ask a question, Mr. Chairman? I don't want to go over any ground that has already been covered by the committee. Have you gone into the question of profits on the contracts, and the basis on which they are let?

Senator O'MAHONEY. That is a problem of renegotiation.

Colonel Redd spoke about that, about renegotiation, and the exclusion of certain items. Perhaps you might amplify the statement on that.

Colonel REDD. Renegotiation has, as one of its primary objectives, to eliminate excess profits after the cost of operating under that contract has been made available. Also we control profits on prime contracts through the buyer and through the procurement committee.

It has been one of the objectives of the Chief of the Procurement Division for some time now to place a great deal of emphasis on holding the profits down.

Senator O'MAHONEY. My understanding was that you have contract renegotiators at Washington and at Los Angeles.

Colonel REDD. Yes, sir.

Senator O'MAHONEY. That is their prime function?

Colonel REDD. Yes, sir.

Senator O'MAHONEY. Operating under the existing law?

Colonel REDD. Yes, sir. They have 107 people working on it right now.

Senator HILL. All the time, constantly?

Colonel REDD. Yes, sir.

Senator HILL. And every contractor knows that his contract will be examined and is being examined with the thought in mind that that contract will be renegotiated?

Colonel REDD. Yes, sir.

Senator THYE. Do you, Colonel, check that contract to determine whether he is doing any featherbedding, whether he is holding additional employees on the job, over and beyond what are actually necessary in the daily function there?

We know that if he has men just soldiering on the job and he is given a plus contract, he has an opportunity to make some money there even though he isn't getting full employment out of the individual.

Colonel REDD. Yes, sir; we watch that very closely, and we watch it in this manner: We have our industrial manpower representatives in each of our district offices and in our regional offices. They are continually making surveys of the utilization of the contracts by the contractors. If they find a situation that is not healthy, they report that to the contractor and give recommendations.

If the contractor does not take action, they then report to the contracting officer. The contracting officer may notify the contractor in writing or verbally that he has an excess of manpower and is going to have to do something about it.

If that does not suffice, we call in the Auditor General to make idle-time studies. We also have the General Accounting Office, if it is a cost-type contract—the General Accounting Office comes in and renders a hand in checking the items.

Senator THYE. Do you go that far on equipment such as machines that may be used if it is construction of buildings or anything of that

nature? They may have units like bulldozers, shovels, cranes, as well as air-pressure equipment which they might be leasing and which might not be used for a week at a time, and they are still under a lease or under a contract to pay.

Colonel REDD. Yes, sir.

General ASENSIO. We do not have the construction contracts.

Senator THYE. That does not fall under your jurisdiction?

General ASENSIO. No, sir. The Office of the Chief of Engineers, through the Army, is our construction agent in the zone of the interior.

Senator THYE. So that would not come under your jurisdiction at all?

General ASENSIO. No, sir.

Senator O'MAHONEY. That will come under the next item, which is "major procurements, other than aircraft."

The purchase of some construction equipment, material-handling equipment, railroad equipment, and that sort.

General ASENSIO. The Senator was speaking of the use of that equipment, sir.

Senator O'MAHONEY. I understand.

General ASENSIO. Whereas the next appropriation is the procurement of that type of equipment.

Senator O'MAHONEY. Thank you very much, Colonel Redd.

General ASENSIO. The next appropriation for consideration is "Major procurement other than aircraft." Our principal witness is General Mundy, of the Air Matériel Command, except for program 210, "Ammunition," which is represented by Colonel Fairfax.

MAJOR PROCUREMENT OTHER THAN AIRCRAFT

STATEMENT OF COL. V. F. FAIRFAX, DEPUTY CHIEF OF STAFF, MATÉRIEL, ASSISTED BY J. J. HOLLERAN, PROCUREMENT AND RESEARCH DIVISION, BUDGET, DEPUTY CHIEF OF STAFF, COMPTROLLER

WEAPONS AND AMMUNITION

Colonel FAIRFAX. Mr. Chairman, members of the committee, as indicated by General Asensio, I will discuss program 210, "Weapons and ammunition."

An unclassified statement for the record has been prepared and mimeographed and has been provided the committee.

The statement provided for the record contains the essential elements of the "Weapons and ammunition" program. My presentation at this time will be in strict consonance with the statement for the record, and what I say today will be more detailed and will contain classified material.

I request, therefore, that my presentation at this time be off the record.

Senator O'MAHONEY. It is understood, then, that this prepared statement will be inserted in the record?

Colonel FAIRFAX. Yes, sir. Copies have already been provided to the committee.

Senator O'MAHONEY. In order to simplify the matter, suppose you summarize that briefly before you go into the classified presentation.

General ASENSIO. Sir, that is a summarization. That is a boiled-down version of what his classified statement will contain.

Senator O'MAHONEY. Very well. That is understood.

(The information referred to is as follows):

STATEMENT OF COL. V. F. FAIRFAX

PROGRAM 210. GENERAL

Mr. Chairman and members of the committee, the weapons and ammunition program for the Air Force consists of all weapons, exclusive of aircraft weapons, and all ammunition, including all types of bombs, rockets, and pyrotechnics, and small-caliber ammunition. These munitions may be filled with explosive, incendiary, chemical, and other types of agents.

We require weapons and ammunition for several purposes:

(1) To equip the troops with standard weapons authorized for their mission.

(2) To carry on the training of troops with these weapons.

(3) For normal operation in connection with and supplementary to the training mission. (Examples are pilot-ejection seats, canopy removers, survival kits, and distress signals.)

(4) We must obtain and test certain newly developed weapons and ammunition to determine their effectiveness. This we do with the aim of keeping the weapons and ammunition program current with latest scientific advances and thereby providing the most efficient and effective weapons and ammunition obtainable.

(5) Most important, we must have specific types of combat ammunition on hand to support our immediate striking power concept until production from industry can match combat consumption. Only with these munitions is our country's Air Force militarily effective.

PROJECT 211. WEAPONS

Sufficient stocks of currently standard weapons are on hand to meet the requirements generated by the additional personnel to be equipped under currently approved programs during fiscal year 1952. Therefore, no procurement of weapons is scheduled.

PROJECT 212. AMMUNITION

Ammunition for training, equipping troops, service test, and for normal operation is for current consumption. It is therefore provided for on an annual basis. The ammunition required to support our immediate striking-power concept is not for current consumption but will be immediately required in the event of emergency. Therefore, we must have certain types and quantities of ammunition on hand to insure that our Air Force has immediate striking power. It is equally necessary that we should not have a greater investment in this type of ammunition than is absolutely necessary. Our estimates are based on these principles.

These estimates contain ammunition required through fiscal year 1952 for training, equipping troops, service test, and for normal operations. In addition, a portion of our initial combat requirements are included. More details on this follow.

In determining the requirements for, and in phasing the procurement of ammunition items, the following basic factors have been considered:

(1) The rate at which ammunition is expected to be consumed by combat units after D-day. We arrive at these consumption figures after analyzing the operations we expect to conduct after D-day in light of the aircraft we expect to have at that time and the rate different types of ammunition are normally consumed by various types of aircraft under the planned conditions. For example, in determining the tons of 750-pound bombs a B–36 wing will drop on the enemy during the course of 1 month's strategic operations, we must use the following information taken from our War Planning Factors Manual:

(*a*) The B–36 sortie rate during the period.

(*b*) Number of B–36 aircraft assigned to a wing.

(*c*) Tons of 750-pound bombs dropped each sortie.

(*d*) Percent of sorties carrying 750-pound bomb.

By multiplying the sortie rate times the number of aircraft times tons carried, times the percent of 750-pound bombs, we arrive at the tons of 750-pound bombs a B–36 wing will drop on the enemy during 1 month's operation.

The war-planning factors referred to are very important in the determination of our net requirements. They are based on World War II consumption experience, as modified by experience in Korea, where applicable.

(2) In arriving at our requirements, we must consider also training and service test requirements in each fiscal year as required for training the active Air Force, and in consonance with scientific advancements.

(3) We must consider the time required for industry to produce new ammunition in volume—normally 12 months. (Follow-on production, or reorder lead time—7 months.)

(4) We must consider the average time required to move and distribute supplies in existence to troops in the field. Studies have indicated that this is 6 months.

(5) We phase the procurement of ammunition so as to insure that an undue load is not placed on industry in any one fiscal year, while yet maintaining production capabilities in being.

(6) And, finally, we establish a system of procurement priorities with the objective of providing the most critical items first while maintaining, as near as possible, a balanced program at all times among the various types of combat ammunition.

From the above comments, specifically those contained in (3) and (4), it will be noted that in order to insure uninterrupted operations after D-day we must have on hand (on D-day) sufficient ammunition to support our deployed combat forces for a period to be determined by considering and weighing thoroughly the elements contained in (1), (3), and (4), above. Our minimum initial combat requirement is the result of this determination.

The 1952 estimates are a portion of a phased-procurement program.

The ammunition program for fiscal year 1952 amounts to $601,770,000. $561,500,000, or 93 percent of this amount, will be used for the procurement of a portion of our minimum initial combat requirement. The total dollar value of this minimum initial combat requirement is $1,840,000,000.

With the funds appropriated to date and requested at this time, it is our policy to buy only those types of ammunition which will be usable by aircraft of the fully modernized Air Force. As the Air Force approaches its complete modernization, we will require larger quantities of certain types.

If you will please turn to pages 82 and 83, I will explain in more detail the various types and quantities of ammunition we propose to buy and the reasons why we require them. The first category is "Rockets and rocket components."

The rocket and rocket components requested will be used by aircraft against air targets and against ground targets. The air-to-ground rocket was first initiated into combat during the latter stages of World War II. It is a comparatively new weapon in aerial warfare but has proven its effectiveness. The air-to-air rocket is our latest aerial-weapon development. One of our latest interceptor fighters, so necessary for defense, especially ZI defense, has been built around this weapon. We have none in stock. We must have the munitions on hand to make our air-defense fighter militarily effective.

The second and fourth categories are "Bombs, bomb components, and chemical items."

In the years between the end of World War II and fiscal year 1950, money was requested only for those items in short supply. We have been training and carrying on our normal operations in a large part with the supplies left over from World War II. These supplies are decreasing from use, deterioration, and obsolescence. Beginning in fiscal year 1950 it was necessary to devote considerable sums of money to replenishing stocks of supplies and procuring new items. In fiscal year 1951, the change in the world situation required us to devote much larger sums of money to replenishing stocks of supplies and procuring new items, including a new family of bombs.

A "new family" of bombs has been designed and developed since World War II for use by our high-speed and high-altitude aircraft. In 1947, after considerable research and study, we decided that the bombs produced during World War II were not aerodynamically suitable for carrying out the assigned Air Force mission with our modern aircraft. When dropped from our modern aircraft, these old-type bombs are very erratic in flight from aircraft to target, causing great inaccuracies which are not acceptable. We found that we could not justify risking expensive aircraft and trained air crews to carry less-effective types of ammunition deep into enemy territory. Following this decision, specifications and characteristics for a "new family" of bombs were agreed upon by this country, the United Kingdom, and Canada. The new family consists of four basic sizes of bombs:

(*a*) 10,000-pound high-performance bomb.

(*b*) 3,000-pound high-performance bomb.

(*c*) 750-pound general-purpose bomb.

(*d*) 1,000-pound special low-drag bomb, to be carried externally by our high-speed jet fighter-bombers.

Following their development, the procurement of these types of bombs is the next logical step in our endeavor to provide the most effective munitions for our Air Force, thereby getting the most out of our national defense dollar.

The general configuration of the new-type incendiary, fragmentation and chemical clusters, will conform with the new family. Stocks on hand and quantities under procurement are below the amounts required to carry out an immediate and continuous air offensive. Service tests and training requirements must be procured annually.

The third category is "Cartridges."

At the end of World War II, the armament for our aircraft consisted of the caliber .50 MG and a small quantity of 20 millimeter percussion type cannons. Since the war we have developed and standardized a 20 millimeter cannon, using an electric primed cartridge. Because this new weapon utilizes the new type cartridge, we must procure the quantities of ammunition necessary for training and for combat. In addition, we must reestablish the production lines for the caliber .50 combat round and procure the caliber .50 and other types of cartridges required to train the combat crews of the Air Force. Stocks on hand and quantities under procurement of both combat rounds, the 20 millimeter and the caliber .50, are below the minimum initial combat requirement.

The fifth category is "Miscellaneous ammunition."

The ammunition included in this category consists primarily of pyrotechnics. Pyrotechnics are the signals, flares, and other lighting devices, such as photoflash bombs and photoflash cartridges, required in normal operations of the Air Force, and in combat. The flares, used in tactical air operations, are required for night interdiction against enemy troop concentrations and movements. The photoflash bombs and cartridges are required in night air reconnaissance operations. Stocks on hand and quantities under procurement of these types of ammunition are below the minimum initial combat requirements.

SUMMARY

(1) We must have on hand on D-day, sufficient types and quantities of ammunition to support our deployed forces in actual combat against the enemy until production from industry can match combat consumption. Our program objective is based upon this axiom and is what we consider as our minimum initial combat requirement.

(2) These estimates are a portion of a phased procurement program, amounting to $1,840,000,000.

(3) The fiscal year 1952 estimates total $601.8 millions.

(4) This includes $40.2 millions, or 7 percent for training and service test; and $561.6 millions, or 93 percent for a portion of our minimum initial combat requirements.

(5) The remaining minimum initial combat requirement has been deferred to fiscal year 1953. This deferral is justified because of the nonprocurability of certain items and because it is consistent with our endeavor to phase ammunition procurement so as to insure that an undue load is not placed on industry and the economy in any one year, while yet maintaining optimum production capabilities. Additional details which are "classified" are available.

This completes my presentation of the Air Force weapons and ammunition program.

(Discussion off the record.)

Senator O'MAHONEY. We will recess at this time until 2 o'clock.

AFTERNOON SESSION

Senator O'MAHONEY. The session will please come to order.

General ASENSIO. Sir, our principal witness in appropriation 200 is General Mundy, headquarters, Air Matériel Command.

MAJOR PROCUREMENT OTHER THAN AIRCRAFT

STATEMENT OF MAJ. GEN. G. W. MUNDY, CHIEF, SUPPLY AND MAINTENANCE DIVISION, AIR MATÉRIEL COMMAND, ACCOMPANIED BY COL. G. B. DANY

TOTAL 1952 BUDGET ESTIMATE

General MUNDY. Mr. Chairman, following your suggestion, we have condensed our presentations in the 200 appropriations to where we will handle the entire appropriation at this time.

Senator O'MAHONEY. Very good, sir.

General MUNDY. We will submit for the record our prepared statements and presentations. If you will turn to page 78 in your book, we have the 200 appropriation broken down by the programs. Our total requests in 1952 amount to $1,800,000,000. We have already covered program 210.

Program 220, "Ground-powered and marine equipment," covers general-purpose vehicles, special-purpose vehicles, railroad equipment, construction equipment, materials-handling equipment, and marine equipment.

Program 230 "Electronics and communication equipment," covers aerial communications systems, identification systems, command communication systems, navigational aid systems, tactical electronics, communications security systems, and communications replacement augmentation programs.

Program 250, "Training equipment," covers training equipment which includes mobile training units, synthetic training devices, radio and radar trainers, aerial targets, and related equipment.

Program 270, "Other major equipment," covers meteorological equipment, radiological equipment, photographic equipment, printing and reproduction equipment, test equipment, flying field and shop equipment, utilities equipment, and classified project.

Senator O'MAHONEY. That last one was 270?

General MUNDY. 299.

Senator O'MAHONEY. Photographic equipment is under 270, General.

General MUNDY. Yes, sir.

Senator O'MAHONEY. Under 299 also?

General ASENSIO. 299 is indicated under 270, sir. It is the last item under 270.

(The prepared statement is as follows:)

STATEMENT OF MAJ. GEN. GEORGE W. MUNDY

BUDGET PROGRAM 220. GROUND POWERED AND MARINE EQUIPMENT

Mr. Chairman and members of the committee, within the budget program "Ground powered and marine equipment," which is presented for your review, there are included six distinct types of Air Force equipment requirements, as follows: General purpose vehicles, special purpose vehicles, railroad equipment, construction equipment, materials-handling equipment, and marine equipment.

In general, the quantity requirements of this equipment are related to the number and functions of organizations and bases set forth in the Air Force program. Individual item requirements are computed on the basis of tables which authorize possession of only that type and specific quantity of equipment essential

to the mission of the organization of air base. Additional safeguards insure intensive utilization of equipment, as for example, the Air Force policy which prohibits certain zone of interior organizations from possessing equipment when it is possible to accomplish their mission through joint use of base equipment; air inspectors constantly check for unauthorized possession of equipment; a permanent board reviews authorization tables with the object of holding allowances to minimum essentials.

General purpose vehicles, as distinguished from special purpose vehicles are both for tactical and administrative use, intended for movement of military personnel, supplies, ammunition and equipment and in general, for all automotive transport needs. The Air Force is continuing its program initiated in fiscal year 1950 of using wherever practicable, commercial type, off-the-shelf vehicles.

Special-purpose vehicles are those which require a specific design to do a particular job, for example, a tractor to tow a heavy bomber must not only have tremendous power but must be able to start its load with smoothness to prevent any damage to aircraft. Another example is a rotary runway sweeper in this estimate. Abnormally frequent jet engine failures at a particular base has been traceable to poor condition of the runway. The jet engine in an aircraft in its take-off run creates a tremendous vacuum and you can appreciate the damage that a stone, a bolt, or other foreign object would do when sucked up into the fast rotating rotor. Not only must the runway be kept in top condition, but it must be frequently swept clean.

At its larger installations the Air Force has railroad sidings to facilitate in and out movement of supplies and equipment, and for local movement of coal, oil, gasoline, and other bulky materials used at the installation. The locomotive and other railroad equipment in this estimate are required for initial equipment at new bases having railroad sidings scheduled for activation in fiscal year 1952 and, also, permit the Air Force to return to the Army, equipment which it has on loan and which the Army now requires for its own purposes.

Construction equipment consists of scrapers, cranes, bulldozers, excavators, concrete mixers, and the like, required to maintain existing air bases and authorized to engineer aviation battalions to construct, rehabilitate, and defend air base sites in forward areas.

Materials handling equipment consists of fork lifts, platform and straddle type trucks, industrial warehouse tractors, and the like. This equipment is a necessity at all air bases and air depots to handle warehouse and supply operations, to load and unload cars and trucks. In general, this equipment is standard commercial equipment used throughout industry.

Lastly, the Air Force has requirements of utility boats and rescue boats at bases adjacent to water areas. Tugs and barges are used at our mobile air matériel area in their supply operations. Rescue boats are required at all air bases adjacent to water areas to provide for the rescue of personnel forced to bail out over water and for rescue purposes in case of aircraft crashes into water. The marine equipment in this estimate has been agreed upon in a standardization agreement between the Navy and the Air Force.

The six types of equipment in this program are all associated in that their function is the providing of automotive transportation or movement of men, materials, or equipment. Each item has been selected on the basis of its capacity, efficiency, or adaptability to do a particular job or a series of jobs. The quantity requirements of each item as listed in this estimate will insure the balanced support of each segment of the Air Force mission.

BUDGET SUMMARY OF PROCUREMENT PROGRAM

General MUNDY. The procurements under appropriation 200 are major items of equipment and in general they are authorized by tables of allowances or tables of organization and equipment. I would like to show you here on this chart how we compute the quantities of these major items of equipment that we require.

Colonel Mullins, of the Air Matériel Command, will make the presentation.

(The statement of requirements is as follows:)

STATEMENT OF LT. COL. J. A. MULLINS

PROJECT 221. GENERAL PURPOSE VEHICLES

Mr. Chairman and members of the committee, funds within this project are to provide the general purpose vehicles required in support of the Air Force. The term, "general purpose," as used within this project, indicates those vehicles used by the Air Force for the transportation of military personnel and material. These vehicles are a part of the organic equipment for tactical and administrative organizations and are termed "general purpose vehicles" as differentiated from "special purpose vehicles" designed to perform a specialized function.

If you gentlemen would now refer to the figure at the top of page 85, you will find indicated there a requirement for $188,113,000. This amount reflects the program requirements that are absolutely essential to be financed in fiscal year 1952. Due to the long lead time of the equipment involved in this project, and the essentiality of transportation equipment for organizations of this nature, it is imperative that these tactical type vehicles required for such organizations be procured. Further importance of this project is reflected in the direct effect which the availability of this equipment will have on the training and activation of organizations, which are so important during a build-up period such as we are now in.

Further down on page 85 are to be found brief statements as to consideration given and policies applied in establishing these requirements. The most important of these are, that not only does this requirement include the vehicles required to activate the new organizations coming into being, due to programed increases of the Air Force, but also provides limited replacement for those vehicles presently in use which will become uneconomically reparable through usage.

The vehicles included in the project are divided into two general categories: The first, military-type vehicles, is characterized by certain design factors peculiar to the military service. Included within these design factors are four-wheel drive, extra heavy springs and transmissions, and an over-all ruggedness of structure not required by the usual commercial-type vehicles used only on highways. The second category includes those standard commercial (off-the-shelf) type vehicles which are used in lieu of the military-type vehicles mentioned above where the mission allows for a lightly constructed vehicle. In general, this project reflects a requirement for military-type vehicles to support all the overseas activities of the Air Force, whereas within the zone of interior, with the exception of several minor activities, commercial-type vehicles will be employed.

Overseas operations require vehicles with military specifications for the following reasons: (1) Overseas organizations are required to be tactically equipped in order to go into immediate operations under combat conditions; (2) terrain and road conditions in most overseas areas are such as to require the more ruggedly constructed vehicle.

Experience in World War II and in the Korean theater has reflected that a large portion of the operations is off the highways and under wartime traffic conditions the items are subject to rapid and excessive deterioration.

The Air Force, through the utilization of commercial-type vehicles in the zone of interior, has realized certain economies within the operation of its vehicle fleet. These economies are reflected not only by the smaller initial cost of this type vehicle, but also in more economical operation and a general decrease in maintenance cost both for parts and labor. Obviously, to be fully effective, a modern Air Force must have over-all mobility for its personnel and equipment. The funds requested in this estimate are to provide this factor for the United States Air Force, and to do it in the most economical manner possible.

On pages 87 and 88 will be found an itemized list of vehicles and quantities that go to make up the total of $188,113,000 which is required by the Air Force in this area.

The fund requirement as shown in the total-cost column of this estimate is a result of utilizing prices that were furnished to the Air Force by the Ordnance Corps as of January 1, 1951.

In brief, gentlemen, this represents a general outline of the Air Force requirement for general-purpose vehicles.

BUDGET PROJECT 222. SPECIAL-PURPOSE VEHICLES

This estimate provides for the procurement of special-purpose vehicles. These are vehicles restricted by design or over-all characteristics to an individual application such as fuel and oil-servicing trucks and trailers, oxygen-generating

trailers and trucks, aircraft-towing tractors, and so forth. The majority of the vehicles included in this project incorporate specifications as developed by the military, and as such, do not have commercial counterparts.

Gentlemen, if you will refer to page 89 you will notice that we are requesting $187,147,000. Herein are found those vehicles most directly associated with the ability of the Air Force to perform its assigned mission. The use of many of the vehicles included within this project may be found to be peculiar to given types of aircraft. As such, the development of this type of equipment must parallel and be in conformance with the over-all development of aircraft within the Air Force. Thus, the dollars being requested are required in part to assure procurement of those special-purpose vehicles which must be delivered to support operation of new aircraft. In addition, it will be noted that these items are, by their very nature, of a type involving long lead time in manufacture and delivery.

Of particular interest in this connection is the requirement for newly developed type of fire trucks. This requirement is partially brought about by the over-all increase in the size of certain aircraft and the utilization of highly volatile chemicals for jet-assist take-off purposes.

Although this estimate reflects requirements for several newly developed items, care has been taken to insure that if these vehicles replace other items of equipment, which, although not as desirable will still perform the peculiar functional mission desired by the Air Force, due allowance has been made for the existing inventory of the type vehicles being outmoded.

Wherever standard-ordnance vehicles or commercial-type vehicles will possibly meet a requirement, the Air Force policy has been to fully utilize such vehicles rather than incur the expense of developing specification which would result in more expensive types.

Now gentlemen, if you will refer to pages 90, 91, and 92 you will find the requirements by type and model of vehicle to be procured by the Air Force during its build-up. For an example let us take item 9 on page 90, which is a tractor, towing, low silhouette, gas-powered, 4-wheel drive for aircraft 35,000 to 200,000 pounds. This is a newly designed aircraft-towing vehicle which will incorporate the latest feature of the automotive-type tractor. These features, namely, hydraulic torque converter transmission, minimum disassembly, and winterization, will provide smooth power at low speed, good maneuverability and service operation in climatic conditions in temperatures ranging from −65 degrees F. to +130 degrees F. The purpose of this vehicle is to tow aircraft within the range of 35,000 to 200,000 pounds gross weight. This particular item has a major application to bombers and cargo-type aircraft.

Requirements for towing tractors for aircraft are generated by the necessity for movement in and out of congested parking areas, into and out of hangers and from the parking area to end of take-off runway in the case of jet aircraft with a high rate of fuel consumption while taxiing.

Statement of Clarence G. Marsh

BUDGET PROJECT 223. RAILROAD EQUIPMENT

Mr. Chairman and members of the committee, the estimate for project 223 appears on pages 93 and 94. The amount requested for fiscal year 1952, $2,879,000, will provide for the procurement of railway equipment such as locomotives locomotive cranes, box, flat, and hopper cars; also equipment required for proper maintenance of base railroad-track facilities. Equipment of the latter type includes motor cars and push cars used to transport maintenance crews and material. The equipment shown on page 94 is required for new bases scheduled for activation, replacement of overage equipment which cannot be repaired economically, for normal operational needs, and will also permit the return to the Department of the Army of equipment now on loan to the Air Force.

The use of railway equipment by the Air Force is confined to base operations. In other words, this equipment is used for the movement of materials from the point of interchange with commercial carriers to warehouses on the various bases, also the intrabase movement of such materials during rewarehousing programs and the movement of coal from storage points to the heating plants.

In making determination of replacement or assignment of railway equipment, the following factors are considered:

(*a*) Condition of base track facilities and weight of rail.
(*b*) Maximum grade of track.
(*c*) Curvature of track.
(*d*) Number of cars received per month.

(*e*) Number of cars switched per day.
(*f*) Number of cars switched at one time.
(*g*) Potential tonnage in-bound and out-bound.
(*h*) Switching service obtainable from connecting rail carriers.

I will now briefly explain the effects of each of these factors:

Factor (a). Condition of base track facilities and weight of rail

This factor is taken into consideration due to the weights of the various types of locomotives, also when consideration is being given to the use of commercial rail-switching service due to the fact that the type of rail and condition of roadbed determines whether or not a commercial rail carrier will permit its motive power to perform base switching. It is a standard practice of the commercial railroads not to perform switching over tracks that do not meet the Association of American Railroads standards.

Factor (b). Maximum grade of track

This factor is taken into consideration when assigning locomotives as the various types of locomotives have fixed tonnage ratings depending upon the grade of the track. As an example, a 25-ton Diesel electric locomotive is capable of hauling 355 tons at a speed of 10 miles per hour on the level, whereas the same locomotive can haul only 102 tons at a speed of 10 miles per hour over a 1-percent grade. An 80-ton Diesel electric locomotive can haul 1,180 tons at 10 miles per hour on the level and 340 tons at 10 miles per hour over a 1-percent grade.

Factor (c). Curvature of track

This factor is also considered when assigned locomotives as the present types in operation vary from 18 to 51 feet in length.

Factor (d). Number of cars received per month

This factor is used in determining the advisability of assigning locomotives or whether it will be less expensive over-all to use the switching service of the local carrier.

Factor (e). Number of cars switched per day

The number of cars switched per day is considered as it reflects the switching load and determines the number of locomotives that must be assigned.

Factor (f). Number of cars switched at one time

The number of cars switched at one time together with factor (*e*), determines the type of locomotive to be assigned. In other words, the overloading of a locomotive has a serious effect on its efficiency, and eventually the unit will require replacement, whereas the assignment of a locomotive or locomotives capable of performing satisfactory service results in low maintenance cost.

Factor (g). Potential tonnage in-bound and out-bound

This factor is of great importance in determining the type of railway equipment to be assigned, as the volume of tonnage to be received or forwarded establishes the requirement. If it is found that the volume will be great, taking into consideration the other factors mentioned, the proper type of equipment will be assigned. However, if the volume is small, it may be more economical to use the switching service of the commercial railroad.

Factor (h). Switching service obtainable from connecting rail carriers

This factor is always considered prior to the assignment of railway equipment. The reason for this is that if it is found that the volume of tonnage received does not justify the assignment of locomotives, the service of the connecting rail carrier is used as a matter of policy.

The type of railroad equipment and the number of units required by the Department of the Air Force depends upon the nature of the various types of installations. For example, the average base with track facilities requires two locomotives, two flat cars and in some instances, depending upon the type of fue used for heating, a hopper car for the movement of coal from the coal-storage area to the heating plant. A large installation such as a supply depot furnishing material and supplies to a large number of installations, will require several locomotives, cranes for heavy lift and loading of coal, also box and flat cars for movement of materials between warehouses.

To simplify maintenance problems and eliminate the cost necessary when a large number of different types of equipment are in the system, the Air Force in coordination with the Department of the Army, has standardized its railway-equipment requirements.

STATEMENT OF LT. COL. J. A. MULLINS

BUDGET PROJECT 224. CONSTRUCTION EQUIPMENT

Mr. Chairman and members of the committee, this estimate will provide for the procurement of construction equipment such as scrapers, cranes, bulldozers, cement mixers, graders, road rollers, etc. In general, this equipment is usually referred to as engineer equipment and, as such, the procurement responsibility has been assigned to the Corps of Engineers with the Department of the Army.

Gentlemen, if you will now refer to page 95, you will find indicated a requirement for $39,016,000. This amount reflects the program requirements that are essential to be financed in fiscal year 1952. The major organizational users of this type of equipment are the Engineer Aviation Battalions. These battalions have been assigned a most vital role in any combat action in which the Air Force may become involved. It will be their responsibility to not only lengthen and strengthen existing runways and to build new ones for our bombers, but they will also be called upon to go into the most forward areas to build temporary strips so essential to the operation of our fighter bombers in close support of ground action. Due to the shortage of this type unit within the Air Force today, every effort must be made to get more of these organizations operationally ready.

On the Air Force bases this equipment is required for the maintenance of the landing strips and the over-all general maintenance and repair of the base utilities and facilities. In view of the foregoing, and long procurement lead time on this type of equipment, the necessity becomes apparent to procure the necessary equipment for those organizations to be activated in accordance with the Air Force programed build-up.

Replacement of in-use inventory for this type equipment is predicated on a 10-year replacement of all equipments which are over age or beyond economical repair. For example, let us take item 5, which is a 12-foot road grader. This item is used by the Engineer Aviation Battalion for towing, grading roads and runways, and general earth moving. This grader has an over-all length of approximately 20 feet, width of 12 feet, and a 12-foot blade attached under the frame.

Gentlemen, if you will now refer to pages 96 through 98, therein are expressed the quantitative requirements by type and model which are to be procured by the Air Force.

In order to realize the savings that result from standardization and volume procurement of this type of equipment, the Air Force, wherein at all possible, is using the same items presently being procured for the Department of the Army and Department of the Navy.

In brief, gentlemen, this represents a general outline of the Air Force requirements for construction equipment.

BUDGET PROJECT 225. MATERIALS-HANDLING EQUIPMENT

This estimate will provide for the procurement of materials-handling equipment consisting of crane type trucks, fork lifts, platform-type trucks, cranes, industrial warehouse trucks, etc. In general, these labor-saving devices are used in the storage of Air Force supplies and in the operation of maintenance facilities.

Gentlemen, if you will now refer to page 99, you will find indicated there a requirement for $3,317,000. This amount reflects the requirements that are essential to be expended in fiscal year 1952 to meet the build-up as programed.

Referring to page 100, the requirements by type of materials-handling equipment to be procured by the Air Force will be found. For example, item 4 is a gas-powered crane with a 6,000 pound capacity and 144 to 216 inch sluing boom. This crane is utilized by all Air Force bases having warehouses in loading, unloading, and stocking materials.

In this area we again find a replacement requirement predicated on the usable life of this type of equipment of 10 years.

Resultant quantities reflected on page 100 were generated by computing the 10-year replacement factor for this type equipment against the in-use inventory only. You will note that there is no requirement for several items in the list. This is the result of a study which reveals the inventory to be in satisfactory condition, thereby requiring no replacement during the ensuing year.

As in previous projects within this program, this type of equipment has been assigned as a single procurement responsibility of the Navy. These policies of standardization and single procurement have resulted in maximum economies through obtaining the lowest price possible.

STATEMENT OF LT. COL. WILLIAM G. BODENSTEIN

BUDGET PROJECT 226, MARINE EQUIPMENT

1. The estimate for project 226, Marine Equipment, begins on page 101. The funds requested for fiscal year 1952, $47,926,000, will provide for the procurement of utility boats and rescue boats for replacement and augmentation, consistent with current requirements for logistics support based on approved Air Force installation and troop programs. Although the average life expectancy of these boats is computed by the Air Force and Navy at 10 years, we use them as long as possible consistent with safety and economy of operation.

Utility boats

2. The estimate for utility boats is contained on page 103 requesting funds amounting to $8,594,000 which is required for transportation of cargo, fuel, and passengers. The current USAF utility boat inventory consists of boats built during World War II with substandard materials such as wood and concrete. Seven types of barges and tugs selected from the list of utility boats standardized for use by the Navy and the Air Force will be procured.

3. Examples of the uses to which we will put the tugs include towing barges in navigable waters adjacent to the Sacramento Air Depot, at Eglin and Patrick Air Force Bases in Florida, the port of Manila, Newfoundland, and the Azores. The liquid barges will be employed for fuel and oil delivery over the inland waterways, in coastal areas and to the Air Force bases at Bermuda and Puerto Rico.

4. Our utility boat requirements have been computed from an Air Force-wide survey of operational needs conducted in January 1951. The results of this survey were evaluated for reduction of quantities to minimum essential needs and for selection of barges and tugs from the list of Navy-Air Force standard equipment to meet the resulting requirement. Funds are requested to procure only current requirements for both replacements and augmentations.

Rescue boats

5. The estimate for rescue boats is contained on page 104, requesting funds in the amount of $39,332,000.

6. These funds cover the initial implementation of an activity recognized as essential and peculiar to the Air Force since early 1942. We have utilized operating experience gained since 1942 to determine the types and limited quantity of boats needed to meet sea and crash rescue requirements in varied waters all over the world. These boats have been selected in consonance with the concept of standardization for both hull forms and main engines in order to minimize repair, maintenance and operating costs. As embodied in these new boats, this concept pursues the best commercial design and engineering skills advanced since military development was discontinued in 1945.

7. In order to clarify the Air Force position and explain our policy, including the establishment of ground rules and criteria for determining rescue-boat requirements as applied to the current expansion program, the basic factors which were given prime consideration are summarized as follows:

(*a*) Implementation of a rescue-boat function to meet the sudden world-wide wartime field requirement during World War II resulted in procurement of miscellaneous types of boats, only a limited number of which were designed as high-speed rescue boats.

(*b*) The accelerated demobilization which began in 1945 critically reduced the Air Force's ability to logistically support even its relatively few remaining boats. Contributing factors were (1) the absence of explicit ground rules by which firm future requirements could be determined and (2) the lack of sufficient maintenance personnel to maintain the variety of types carried in inventory.

(*c*) Deterioration since 1945 has multiplied the problem. Remaining boats have reached the limit of their useful life expectancy, averaging eight-plus years of age. This has reached the point where increasing maintenance and repair costs for reclamation will exceed the original capital cost of the boats.

8. Actions taken to resolve these problems and provide a firm, economical Air Force rescue-boat program were—

(*a*) To adjust the inventory of boats to minimum operational needs within limits of the then-current dollar ceilings, an agreement was made with the Department of the Navy to standardize rescue boats common to both services, reducing the number of types from 11 to 5 with three types of engines. Boats excess,

substandard, nonstandard, and those beyond economical repair were sold under the provisions of Public Law 600, with the proceeds derived from these sales reflected in subsequent budget estimates. For example, our requirement in the fiscal year 1951 program was for 17 shallow-water boats. Funds were requested for 14 of these, the remaining 3 being purchased from proceeds of sales made under Public Law 600.

(*b*) Continued technical study and review of operational requirements since the Korean situation developed has resulted in further standardization by agreement between the Air Force and the Navy. This has reduced rescue-boat sizes and types to three from the previous list of five. This achievement is due to the ability to develop operational characteristics for modern boats, capable of greater speeds and longer range with greater load capacities, resulting in boats greatly superior to, and estimated to have a service life much greater than, the World War II boats now on hand.

(*c*) To gain the economy advantages of centralized procurement of boats, engines, spare parts, and marine supplies, the Air Force initiated a joint cross-servicing agreement with the Department of the Navy, finalized and published on November 29, 1948, whereby that agency assumed single purchase responsibility for the Air Force. This agreement predated the Munitions Board directive assigning single service purchase responsibility for small boats and harbor craft to the Navy.

9. Implementing the action cited above and applying these adjustments enabled us to develop simple, clear-cut criteria for determining requirements. The computation of our requirements and assignment of rescue boats is in accordance with that criteria, which follows:

(1) Assignment of rescue-boat units will be made in the following instances:

(*a*) At Air Force bases or activities where the air traffic and/or instrument approach procedures are predominately over water and within a 10-mile radius of the base,

(*b*) Patrol of bomb and gunnery ranges in water areas,

(*c*) Water areas beyond the 10-mile radius cited in (*a*) above where the frequency and density of air traffic warrants rescue-boat patrol.

(2) Boat sizes will be based on the following:

(*a*) Open sea areas—85- to 93-foot boats.

(*b*) Partially protected areas, harbors and bays, 40- to 55-foot boats.

(*c*) Protected areas, large rivers and lakes, 24-foot boats.

(*d*) Shallow water, swamps and flats, 18- and 24-foot boats.

(3) Where more than one size boat is required by virtue of a location that combines more than one criteria in the above, determination will be made by Headquarters USAF based on local justification and survey by the command.

(4) To assure availability of boats to provide adequate coverage, a minimum of two boats of one size will be assigned per rescue unit. When two activities requiring rescue craft are reasonably adjacent, one unit normally will have three assigned boats which are adequate to cover the entire area.

(5) Rescue boat coverage will be provided in accordance with (T/O&E 1–2713), which is a cellular type T/O&E permitting 8-, 16-, or 24-hour operating basis, as required.

10. The current United States Air Force rescue boat program was computed by application of the foregoing ceriteria to the approved base utilization program for 95 wings. This application consisted of superimposing the criteria upon the published instrument approach and let-down charts for the bases concerned, then modifying the results by the recommendations of the field commanders concerned, when the Air Staff found such action to be warranted. The determination of the over-all requirement for rescue boats envisions replacement of the existing obsolescent inventory in its entirety. However, funds for replacement of 50 percent of this inventory have been deferred to later budget requests in view of indications that industry cannot absorb our total construction program in an original order.

11. The funds requested in this budget estimate, therefore, are for the financing of tooling costs and Government-furnished property approved by the Congress in previous requests and for procurement of boats in quantities sufficient to meet present programed shortages plus replacement of 50 percent of our current rescue boat inventory.

12. Cited procurement costs have been obtained from the Bureau of Ships, Navy Department; resulting funds requested include the hulls, engines, engine spare parts kits, and first destination transportation costs.

STATEMENT OF MAJ. GEN. F. L. ANKENBRANDT, DIRECTOR OF COMMUNICATIONS

BUDGET PROGRAM 230. ELECTRONICS AND COMMUNICATIONS EQUIPMENT

Mr. Chairman and members of the committee, the appropriation request to be discussed at this time covers the electronics and communications modernization program to equip the combat-ready force and supporting units of the expanded 95-wing Air Force. The amount requested in the estimate now before this committee for consideration is $384,167,000. The financing and procurement of equipments for this program has been phased over a period of several years. The first phase was accomplished with appropriations obtained in fiscal year 1947. Each year thereafter, appropriations have been authorized on a gradual scale to continue the modernization on a continuing basis. The increases in fiscal years 1951 and 1952 are due entirely to the expansion program resulting from the current international situation. In our build-up in this area, we have very carefully considered the production capabilities of the electronics industry to manufacture the complex equipments required and phased the dollar requirements accordingly, to the best of our ability. In the determination of the items and quantities to be procured due consideration has been given to a balanced program and wherever possible the financing and procurement has been deferred.

Items that can be obtained in a relatively short period of time, 6 to 8 months, or where the production line has been established and the capabilities of the manufacturers are such that follow-on orders are obtainable within a reasonable period of time, have also been deferred. With the cooperation of the National Production Authority, Munitions Board, and other defense agencies, one of our principal efforts has been to build up the production base in this critical field, in order to have volume production capacity in being in the event it is needed in the immediate future. Further, I can assure the committee that I have personally reviewed and screened the over-all requirements item by item. During the screening process, reductions have been made in the basic requirements pending a further study, and as stated previously, certain requirements have been deferred. In a rapidly expanding program, such as the program you gentlemen are reviewing today, it is a most difficult task to establish accurate requirements across the board, phase in those requirements timewise, to meet the Air Force's objectives and carry out our responsibilities. However, a diligent effort has been made to do a good job of screening our dollar requests to provide the minimum essential requirements, and at the same time build up our forces to defend our country.

The objectives of the Air Force's electronics and communications program have not changed since my last appearance before this committee. A brief résumé of the objectives are as follows: In order to keep pace with aircraft of the latest design with higher speed and longer range capabilities, the Air Force must of necessity equip its forces with new and improved electronics and communications such as that proposed for financing in this program for (1) an all-weather operating capability (2) air defense, early warning, tactical ground support, and fighter control (3) offensive and defensive electronics warfare (4) tactical air/ground communications, and (5) a secure and effective communications system for control of combat and logistic operations on a global scale. The essentiality of the latest and most effective electronics and communications equipment in modern day warfare is a well known fact. No matter how new and capable the aircraft in the Air Force, no matter what weapons they carry, they are completely ineffective in darkness and bad weather, and only partially effective in good weather, without the electronics equipment to be procured in this program.

Mr. Chairman, this concludes my general statement. Many of the details to be presented for the various program elements are classified, so with your permission they will be off the record. The $384,167,000 requested in this estimate covers seven specific electronics and communications programs. This area is shown in the book before you starting with page No. 105 through page 114.

STATEMENT OF BRIG. GEN. G. P. DISOSWAY

BUDGET PROJECT 250. TRAINING EQUIPMENT

Mr. Chairman and members of the committee, this program is concerned with major items of training equipment and is composed of four projects: Mobile training units, counterpart training devices, radio and radar trainers, and aerial targets. These items are essential to both air and ground crews in transitioning

to new types of aircraft and other equipment and in maintaining proficiency in aviation skills.

The Air Force is requesting 93.1 million dollars in this program for fiscal year 1952.

The first of the four projects is concerned entirely with mobile training units (project 251).

Mobile training units are self-contained, transportable units, composed of operative mock-ups of actual aircraft and guided-missle systems, such as the electrical system, fuel system, control system, and so forth. Highly qualified technical instructors furnished by the training command conduct classes in the field using this equipment.

The primary purpose of the mobile training units is to transition maintenance and operations personnel to new aircraft and missiles prior to the assignment of such new equipment to a unit. There is a continuing use by all commands for proficiency and upgrading training.

The Air Force is asking for 3.6 million dollars in this project. This will provide mobile training units for the B–47 and KC–97 aircraft and for certain of our guided missiles.

The next project is concerned with counterpart training devices (project 252). These devices are designed to simulate a particular flight operation or procedure. They provide a more economical and safer means of imparting a portion of the flying training program. In connection with this program, I will refer to the following devices:

Flight simulators.—These are electronic-mechanical devices built to precisely duplicate the cockpit configuration, control pressures, and flight characteristics of a specified airplane. The purpose of these trainers is to provide for transition, proficiency, and normal and emergency crew procedure training.

Instrument trainers.—These are designed to simulate actual instrument flight. They have a more general application than flight simulators, inasmuch as they do not simulate a particular aircraft. Instrument trainers are used for initial student training and maintenance of proficiency for rated pilots.

Flexible gunnery trainers.—These were developed to authentically simulate attacking aircraft and designed to measure accurately the gunners' ability to score hits.

We are requesting 54.2 million dollars in this project, to provide 93 flight simulators for the B–47, B–36, F–86, F–89, C–97, C–119, and C–124 aircraft; 46 instrument trainers; and 68 flexible gunnery trainers, for our tactical organizations and air-crew schools, and 31 attachments for Z–1 instrument trainers.

The third project is concerned with radio and radar trainers (project 253). These trainers are designed to provide on-the-ground simulation of air operations involving radio and radar equipment employed in air navigation, bombing, gunnery, detection, and control of aircraft, and electronics countermeasures. The main items are gunlaying radar trainers, shoran trainers, loran trainers, radar bombing and navigation trainers, and electronic countermeasures trainers.

We are requesting 30.7 million dollars to provide 465 radio and radar trainers. These trainers are required to support our tactical wings and to meet the expanded school programs, such as B–36 flexible gunnery, fighter-interceptor, electronics, observer, B–29 combat crew training, and B–47 combat crew training.

The fourth project is concerned with aerial targets. The Air Force is procuring two types of rigid targets at present. The first is the A–1 winged tow target, which is an all-metal glider, capable of withstanding speeds of 450 miles per hour at altitudes above 35,000 feet. This is used by our fighter pilots for practice gunnery at high altitudes.

The second target is the OQ–19A, a radio-controlled, pilotless airplane, which will fly for 1 hour at 220 miles per hour without refueling. This device is being used in Strategic Air Command's and the flexible gunnery school's gunnery programs to give bomber gunner teams practice in firing at a realistic target.

The 4.6 million dollars which we are requesting in this project for fiscal year 1952 will provide 1,745 targets.

PROCUREMENT REQUIREMENTS AND CONTROL

Colonel MULLINS. Mr. Chairman, I would like to state that this method of computation is applicable to most of the 200 area, especially applicable to the 220 and the 270 areas wherein the Air Matériel

Command actually computes the requirements of this particular area.

The authorization for a particular item necessary in the operation of a bomber wing or fighter wing will appear in a Table of Organization and Equipment. The authorization for the item which is issued to a base appears in Tables of Authorization. I will use the term "T. O. & E." which applies to the authorization for a tactical organization and the term "T. A." applying to the authorization for a base.

These authorizations are set up by individual items for each individual organization or base and are authorized to be on hand, as applied against the program. By multiplying the program wing strength by the authorization for each particular item, the total authorization for that particular item for the Air Force world-wide is computed.

Another element of the total authorization for any given item is the replacement requirement that must be procured and be on hand during any given year to replace items that are worn out through fair wear and tear or become uneconomically reparable. The replacement base is multiplied by the replacement factor for each item which gives us a replacement requirement for a year's period.

I use the term "replacement base" because in this particular estimate the replacement base used was the 48-group Air Force in the amount of equipment that we had in use at that time. The Air Force does not buy replacement quantities on equipment that is on order at the present time but has not been delivered, or on equipment that has only been in use for a very short period of time.

Senator O'MAHONEY. But the replacement base means, does it not, the material which you have computed previously necessary to keep the 48 groups in operation? Is that what you mean?

Colonel MULLINS. Yes, sir. We use the term "in-use inventory."

Senator O'MAHONEY. You are not using the word "base" in the ordinary connotation in which it would apply in discussing Air Force operations or in fact any military operations?

Colonel MULLINS. No, sir.

Senator O'MAHONEY. It is a computation base?

Colonel MULLINS. Yes, sir.

Senator O'MAHONEY. Mathematical?

Colonel MULLINS. A mathematical base on which we establish the over-all replacement requirement.

Senator O'MAHONEY. How do you determine the replacement factor?

Colonel MULLINS. The replacement factor is applied by individual items based upon actuarial experience as to how fast that particular item wears out, or to word it differently, what the life of that particular item is. If previous experience shows that over a period of 10 years the item will wear out, then the replacement factor is 10 percent. You would have to replace, in other words, your entire inventory within a 10-year period.

Senator O'MAHONEY. And you have the computation of the life of every item in the whole category?

Colonel MULLINS. I will not say every item because we have some new items which we have not had time to establish actuarial experience on.

Senator O'MAHONEY. Except for the new and experimental items on which you have no working knowledge at all, of course.

Colonel MULLINS. That is correct. In addition, at the end of any given year, we must have in stock a certain quantity of each item to insure the Air Force that it will have a continuing supply. Consequently we have what we call a stock-level requirement.

This stock-level requirement is computed against the replacement requirement for the given year, because it will be the Air Force issues of a particular item during the year. The yearly replacement requirement of an item multiplied by the stock-level factor results in a stock-level requirement.

The total of these three requirements, (1) the total authorized to be in use at any one given time within the Air Force, (2) the total replacement requirement for the fiscal year, and (3) the stock-level requirement that we must have on hand at the end of the year, results in a total requirement for the particular item. By deducting the total inventory, which includes those items in use, those items in stock and those items which are on order undelivered, from the total requirement, we arrive at a procurement requirement. This requirement multiplied by the unit cost results in a procurement-dollar requirement, which is the budget estimate.

Senator O'MAHONEY. Very well, sir. I think that is very clear.

General MUNDY. Sir, we have experts in each of these programs who are prepared to answer any question that you might want to ask as to how we justify the dollar figures that we have. On page 78 is the summary of the total.

Senator O'MAHONEY. My first question arises from the fact that the estimate for weapons and ammunition in 1952 is less than the estimated obligation for 1951. I assume that that is accounted for by the explanation which we have received this morning, that the budget was not filled out for long lead-time items which are planned to be taken care of later.

General ASENSIO. That is right, sir.

Senator O'MAHONEY. With respect to ground power and marine equipment, on the other hand, you are up a little over $18,000,000. Electronics, you are down. How does it happen that you go down on electronics and communications equipment while you are planning to expand the Air Force in the sense that you are buying more equipment?

General ASENSIO. I would like to give this general statement, sir. Our total requirements in 1952 on the ground power and marine equipment have gone up largely by virtue of the partial financing element, where certain financing was deferred from 1951 to 1952. Otherwise the reflection would have been in the other direction.

Senator O'MAHONEY. That is where the figure has gone up. But where it goes down what is the answer?

General MUNDY. I believe that Major Singer can give you the answer.

Major SINGER. I am Major Singer, Directorate of Communications, Headquarters, United States Air Force. Sir, we started these programs in 1947. Each year we have gradually asked for dollars to reach the point in the present program where we are about to buy all the initial equipment that we will need. With any further expansion, of course, we will come in for additional funds. That is the reason for the increase in 1952.

Senator O'MAHONEY. You weren't buying electronics and communications equipment in 1947 and 1948 or 1949 for these new-type aircraft, or for these new-type missiles that we are now only beginning to move into production.

Major SINGER. Those particular items appear in the aircraft appropriation or guided missile appropriation and not this particular item.

ELECTRONIC EQUIPMENT

Senator O'MAHONEY. What sort of electronic equipment is used in this item?

Major SINGER. The first program is the ultra-high-frequency equipment which is required to replace the very-high-frequency equipment now in use.

(Discussion off the record.)

Major SINGER. The third program is the global communications system program which we are modernizing after establishing it in the early stages of World War II.

Senator O'MAHONEY. Project 235, tactical electronics systems, for example. Are those old or new?

Major SINGER. Those are all new. All the items that we propose are the same items that we started buying back in 1948 and 1949 and 1950.

Senator O'MAHONEY. These are not improved systems?

Major SINGER. They are improved systems, yes; but they are essentially the same systems we have been buying for the past 2 or 3 years.

Senator O'MAHONEY. Differing only in variation.

Major SINGER. Yes, sir. Not any configuration changes at all, sir.

Senator O'MAHONEY. Are these for communication from plane to plane?

Major SINGER. Are you speaking of the tactical electronic system?

Senator O'MAHONEY. Yes.

Major SINGER. Sir, the majority of those items are for the tactical control group program, or those units that will provide air defense and tactical support to the Army units. Also included is the electronics countermeasures equipment which are installed in airplanes. But that is a minor portion of it.

(Discussion off the record.)

Senator O'MAHONEY. On the record. Are these systems that are installed on all planes, or substantially in large number of planes?

Major SINGER. Yes, they are.

Senator O'MAHONEY. So that you must have enough money to equip all the planes that you operate?

Major SINGER. Yes, sir, we should.

COMMUNICATIONS SYSTEMS

Senator O'MAHONEY. What is the difference between 231, aerial communications systems, and 233, command communications system?

Major SINGER. Sir, the only difference is this: Because we are converting completely to the ultra-high-frequency band and the Navy is doing likewise, we made a special program area of that until such time as we complete the initial installation, then it will appear under

navigational aids. It was a major item and we brought it out separately.

Senator O'MAHONEY. Will this be a universal communications system in the sense that all aircraft under the Department of Defense can utilize it?

Major SINGER. That is correct, sir.

Senator O'MAHONEY. Army, Navy, and Air Force?

Major SINGER. Yes, sir.

Senator O'MAHONEY. That means the system, but the controls might not be the same?

Major SINGER. Yes, sir.

GLOBAL COMMUNICATIONS SYSTEM

Senator O'MAHONEY. Did you describe the global system?

Major SINGER. No, sir, I did not. The global communications system is a point to point telegraph or radio teletype system that provides logistic support and control of long-range aircraft regardless of where they may be operating. It has six principal stations located at strategic points throughout the world, so that any long-range aircraft can remain in contact with its commander at any time, sir.

MILITARY AMATEUR RADIO SYSTEMS

Senator O'MAHONEY. I notice that in 1951 we had a substantial appropriation, $768,000, for military amateur radio systems. There is nothing in this budget for that purpose.

Major SINGER. Sir, before Korea our program was to try to build up our radio communications personnel by installing military amateur stations throughout the country. Since that time most of the communications people have either been called back into the service and we have been restricted to a point where we can only provide this equipment at our air bases. Until such time as legislation is approved which will permit us to furnish equipment to civilian components, we do not intend to ask for additional dollars.

EQUIPMENT FOR 95-WING AIR FORCE

Senator O'MAHONEY. Will this appropriation for electronics and communications equipment service a 95-wing Air Force?

Major SINGER. Not completely, sir. The Air Force deferred certain items because they require further development. We have also deferred certain items because the Air Force decided not to accelerate modernization in some areas too rapidly.

Senator O'MAHONEY. What is too rapid acceleration of modernization?

Major SINGER. For instance, under our air navigational aid program we have still some World War II type equipment that are not exactly filling the requirement, but they can serve until such time as we can take another look at the program and I think you will find they will be included in future estimates to take care of the total.

Senator O'MAHONEY. Dollarwise, how much is missing from this appropriation?

Major SINGER. About $250,000,000, sir.

Senator O'MAHONEY. This is minus $250,000,000 in terms of a 95-wing group?

Major SINGER. That is correct, sir.

Senator O'MAHONEY. Thank you very much, Major.

SPECIAL-PURPOSE VEHICLES

General, I would like to ask you one question about these special-purpose vehicles. Are they all special to the Air Force?

General MUNDY. The Navy or any flying organization can use things like refueling trucks or oil-serving trucks. These items are developed for a special purpose, for example, a crash truck is developed to put out airplane fires or a refueling truck is developed to refuel an airplane.

Senator O'MAHONEY. Do you procure these items?

General MUNDY. The Air Force procures certain specialized equipment.

Senator O'MAHONEY. Have you checked with the engineers, for example, to determine the unit cost and the total cost?

General MUNDY. Yes, sir.

General ASENSIO. In this area, sir, in projects 221, 223, 224, 225, and 226, all are 100 percent procured for us by other services. Two hundred and twenty-two is 70 percent other service, 30 percent Air Force. Two hundred and thirty is about 30 percent other services, 70 percent Air Force procured.

General MUNDY. Where one service is given the procurement responsibility of a particular item, the other services do not procure these items. There is no competition in the procurement of these individual items.

AMOUNT NEEDED FOR 95-WING AIR FORCE

Senator O'MAHONEY. Will this appropriation accommodate a 95-wing Air Force?

General MUNDY. We show the minimum requirements, which is based on the phased build-up. This does not meet our total requirements.

Senator O'MAHONEY. How much is it lacking?

General MUNDY. $136,000,000 in 220.

Senator O'MAHONEY. In all of the 220's?

General MUNDY. Yes, sir.

Senator O'MAHONEY. $136,000,000 short?

General MUNDY. $136,377,000.

Senator O'MAHONEY. Short?

General MUNDY. Short of our total requirements for a 95-wing program.

Senator O'MAHONEY. Have you discussed with higher authority in the Defense Department the utility of this equipment in overseas bases when those bases are constructed?

General MUNDY. I do not believe I quite understand your question, sir.

Senator O'MAHONEY. Is it conceivable or contemplated that any of this material will be used overseas in the NATO enterprise?

General MUNDY. No, sir. This requirement is for the Air Force. This is not going to NATO countries.

Senator O'MAHONEY. None of this?

General MUNDY. No, sir. This is the Air Force requirement.

Senator O'MAHONEY. Let us suppose that an air base is built overseas for NATO purposes. Is any of this equipment to be used there?

General MUNDY. If it is a United States Air Force base, or United States Air Force unit going in there, this equipment would go with them.

Senator O'MAHONEY. If any part of the 95 group went there, it would go?

General MUNDY. If it were an Air Force unit or base, it would have this equipment.

Senator O'MAHONEY. Do you wish to discuss the training units?

General MUNDY. Colonel Dany is present and will answer any questions concerning training equipment.

STATEMENT OF COL. GEORGE DANY, DIRECTOR OF TRAINING, UNITED STATES AIR FORCE

TRAINING PROGRAM

Colonel DANY. I am Col. George Dany, Director of Training, Headquarters, United States Air Force.

Mr. Chairman, the major items for training are contained on 115. As you will note, this is broken down into four subprojects: Mobile training units, counterpart training devices, radio and radar trainers, aerial targets and related equipment.

Senator O'MAHONEY. What sort of training is contemplated for the use of the mobile training units?

Colonel DANY. The mobile training unit is equipment which is the same as component parts of an aircraft. I have some pictures that I can show you that would probably give you a good idea of what equipment is involved. Colonel Robertson, will you bring the pictures out, please?

AMOUNT REQUESTED

Senator O'MAHONEY. You will observe that in 1950 the actual obligations for this purpose amounted to 3.8 million dollars. It jumped to 16.7 million dollars in 1951. Now it is down to 3.6 million dollars, or less than it was in 1950.

Colonel DANY. In 1950 the appropriation was 3.8, based on the fact that we had a lower number of using agencies than we do now. In 1951 and 1952, we had to provide additional mobile training units for the new tactical units being activated under the 95-group program. The mobile training units have about 13 months' lead time for procurement.

MOBILE TRAINING UNITS

Senator O'MAHONEY. Let's get the use of the word "mobile" clear. Here, for example, is a pilot ejection seat. I take that to be an instrument in which a pilot is trained without leaving the ground.

Colonel DANY. The pilot will use that particular portion of the mobile training unit to be checked out on what the controls are, and what actually happens to the equipment.

Senator O'MAHONEY. Is this used in the air or on the ground?

Colonel DANY. It is used on the ground, sir.

Senator O'MAHONEY. Why do you call it mobile?

Colonel DANY. The reason we call it mobile, is that the various portions of this mobile training unit are broken down into about 10 different sections. These sections are transportable by air. We take this type of equipment into the field with instructors specially trained by the training command, and they train airmen and crew members, on the new type of equipment which the unit is going to get, by the use of these aids.

Senator O'MAHONEY. They are mobile in the sense that they are taken from training base to training base, if necessary.

Colonel DANY. That is correct.

Senator O'MAHONEY. How does it happen that the need is so much less in 1952 than it was in 1951?

Colonel DANY. The need, actually, in 1952, is as great or greater than in 1951. There is a 13-month lead time in the procurement and manufacture of one of these items. Therefore, in 1951 we programed for the mobile training units which will be activated under the 95-group program in fiscal year 1952.

Senator O'MAHONEY. This column is headed "Obligations." Am I to understand therefore that you have not yet received all of the equipment under this description for which you have entered into contracts?

Colonel DANY. That is correct: we have not. Actually in 1951 we had funds for the purchase of 76 mobile training units. Of those 76 we have only procured 7 so far, although we have the contracts out for the remainder.

Senator O'MAHONEY. Then why do you need any money for 1952?

Colonel DANY. For 1952 we have to program for units which are coming in as part of the 95-group program but will not come in until the latter part of fiscal year 1952 or in fiscal year 1953.

Senator O'MAHONEY. So you have been doing the best to shove off the appropriation until it is essential?

Colonel DANY. That is correct, sir.

COUNTERPART TRAINING DEVICES

Senator O'MAHONEY. The next item follows a different trend. These are the counterpart training devices. Here you are almost $7,000,000 higher than you were in 1951. In the first place, what are counterpart training devices, and why the increase?

Colonel DANY. The counterpart training devices, which we are referring to under this project, are of three types. One is a flight simulator.

Senator O'MAHONEY. Will you describe these items to us? How do you simulate flight?

Colonel DANY. This is the picture of the F–86–D, which is our single-place, interceptor aircraft. In the upper picture, in the left-hand corner, you will see the cockpit configuration. In back of it you see the supporting elements which make the trainer work, and also

contains the operator's booth. This is another picture of the supporting equipment.

This illustrates how that equipment can be opened up for ease of maintenance.

Senator O'MAHONEY. This pilot's seat, this graph gives us a picture of an object which is how large?

Colonel DANY. Across here it is about 20 feet. It is about 15 feet high.

Senator O'MAHONEY. What does it cost the Air Force to get one of those?

Colonel DANY. The average cost of the simulators run around $450,000. The unit cost for that particular one, the F–86–D, is $427,800.

Senator O'MAHONEY. What do you get for $427,800? How many of these instruments?

Colonel DANY. You get all of them, sir. That is all part of the one instrument.

Senator O'MAHONEY. All six of these for that price?

Colonel DANY. Yes, sir. Inasmuch as this is an interceptor we can work the radar program entirely on the ground. The man can take off, theoretically, in this gadget. He climbs up and can intercept an enemy aircraft, shoot it down and come down, and never leave the ground. This is the radar control operator's position. The entire procedure is recorded here and traces the course, showing how the pilot made the intercept on the enemy airplane. This is the operator's panel. The operator has a series of buttons which he can push while the plane is in theoretical flight. He can have a flame out if it is a jet aircraft, or have a simulated fire in the engine: he can put ice on the wings: he can do all manner of things to this particular simulator which gives the pilot experience under those types of conditions which he would not have obtained otherwise.

Senator MCCLELLAN. He does not know what will happen as the director of it—the operator—punches these different buttons and confronts him with a condition. You then judge how he reacts and how he operates the plane under such conditions, and that also gives him training in emergencies.

Colonel DANY. It certainly does. It gives you training you cannot have in the air.

Senator MCCLELLAN. How does that compare with actual flight or training?

Colonel DANY. There is no real substitute for actual flight. However, these training devices will give you substitute training on the ground, at a lower cost. For one example—it only takes an average of $25 an hour to operate one of these as opposed to an average of $150 to operate the actual aircraft in the air. There is a certain amount of time that can be given on the ground that will save time in the air. That is a direct cost saving.

Senator MCCLELLAN. You are able to correct some of the pilot's mistakes?

Colonel DANY. And you can correct them right away. You can stop the trainer at any time and say "Brother, you just made a big error; this is the error," You can show it to him.

Senator O'MAHONEY. You can say that you are on your way down right now and you do not know it.

Colonel DANY. Yes, sir. I was in one the other day. A pilot had come down from a flight and they put ice on the wings. They forgot to take it off. I started down the runway and only got a foot off the ground when I crashed. I didn't know what caused it. They had ice on the wings, and the simulator knew it and I did not. I crashed.

Senator MCCLELLAN. Were you supposed to ignore it?

Colonel DANY. I was theoretically supposed to know it. It was a good illustration of how an airplane with ice on the wings would act in a take-off.

Senator O'MAHONEY. You were in the simulator?

Colonel DANY. Yes, sir. If I had been in the real aircraft I would not be here to tell you about it.

Senator O'MAHONEY. How many of these units do you have, or do you want in this budget?

SIMULATORS REQUESTED

Colonel DANY. In addition to this particular simulator, we want simulators for the B–36.

Senator O'MAHONEY. Here is one for the B–50.

Colonel DANY. We are not asking for any B–50's in this particular program because that was purchased out of 1949 funds. The reason I have a picture of it is to show you one of the larger types of simulators for the bombardment-type aircraft as compared with the fighter type.

Senator O'MAHONEY. How many of the F–86 are you planning to buy?

Colonel DANY. Twenty-eight for the fiscal year 1952.

Senator O'MAHONEY. That is 28 at about a half a million dollars each?

Senator MCCLELLAN. Why do you need that many?

Colonel DANY. We need one for each squadron. We would give assigned pilots 2 hours a week. We would like to give them more but that is all we can afford to give.

Senator MCCLELLAN. You need one for each squadron. How many pilots in each squadron?

Colonel DANY. About 50 pilots.

Senator O'MAHONEY. When a pilot undertakes this training how experienced is he?

Colonel DANY. We use simulators in two places. We use them in the fighter squadrons and also in our schools, training the people to become interceptor pilots. In the units the experience can carry all the way from no experience on a particular aircraft—and in that case we would like to check the pilot out on the simulator before he climbs into the aircraft—to pilots who have 3 to 4 years on the equipment. It is a proficiency trainer as well as an initial trainer. We use them in the school to train individuals before we send them to the units.

Senator O'MAHONEY. Do these instruments simulate practically all of the conditions that might develop in the air?

Colonel DANY. They simulate all of them.

Senator O'MAHONEY. All of them? No qualifications?

Colonel DANY. No qualifications, sir. All of them.

Senator O'MAHONEY. Is this the most expensive of all?

UNIT COST OF B-36 SIMULATOR

Colonel DANY. No, sir. Actually the B–36 simulator is the most expensive, being a bigger type. The unit cost on that is $716,000.

Senator O'MAHONEY. You have all those you want?

Colonel DANY. We will have one for each B–36 group.

Senator O'MAHONEY. Do you have them already?

Colonel DANY. We don't have them already. We need four in the fiscal 1952 program.

Senator O'MAHONEY. How many do you have on hand?

Colonel DANY. We have no B–36's on hand.

Senator O'MAHONEY. Of course you are modernizing it, putting jets into it?

Colonel DANY. That is right.

Senator O'MAHONEY. You will continue to use them for some time?

Colonel DANY. Yes, sir. As long as the airplane is in active use in the Air Force, we will use the simulators.

Senator O'MAHONEY. Four of the B–36's at $716,000?

Colonel DANY. Yes, sir.

UNIT COST OF B–50 SIMULATOR

Senator O'MAHONEY. What does the B–50 cost?

Colonel DANY. $240,000.

Senator O'MAHONEY. How many of those do you have?

Colonel DANY. Two, sir.

Senator O'MAHONEY. Are you planning any more?

Colonel DANY. No, sir.

Senator O'MAHONEY. Here is a great variety. Twenty-eight of these, four of the B–36's, two of the B–50's. How do you account for that?

Colonel DANY. Colonel Robertson, will you bring the chart over showing how we program our flight simulators?

General TODD. I think, Mr. Chairman, if I may offer one comment, it should be emphasized that the one for the F–86–D will train only one person per airplane for the airplanes assigned to the unit, whereas the B–36 trains all 10 of the crew members that are necessary to man the B–36. There is a great difference there in the numbers of crew members that each one will train on each simulated flight that is made.

Senator O'MAHONEY. Only one person will be trained on the F–86–D?

Senator MCCLELLAN. That is because it is a single-seat fighter?

Colonel DANY. Yes, sir.

General MUNDY. The simulator trains the crews.

Senator MCCLELLAN. In the B–36 you have the full crew in there on each simulated flight?

Colonel DANY. I might qualify that by saying that we train the portion of the crew that is concerned with flying the aircraft. For instance, you would not train the radio operator, you would not train the gunners and so forth in the flight simulator. But you are training the pilot, copilot and engineer.

Senator MCCLELLAN. Training those responsible for the operation of the plane itself?

Colonel DANY. That is right, sir;

Senator O'MAHONEY. I wonder, General, if we have any estimate of what it costs Uncle Sam to train the pilots, to operate this modern air fleet?

Colonel DANY. I have not seen a recent estimate on the cost of running the pilots through to the B–36. We have an estimate of how much it costs to run him through what we call the undergraduate portion of the program. To actually qualify a man as a B–36 pilot, I do not have the figures.

Senator O'MAHONEY. Let me make this personalized. I look around the room and see a lot of Air Force personnel in uniform. How much has Uncle Sam invested in the military personnel in this room? In training and otherwise.

Colonel DANY. I believe that General Asensio works with the figures for the Air Force and might be best qualified to answer that particular question, sir.

General ASENSIO. Sir, a great many of the officers you see are not what we term rated. They are not fliers. I think that probably——

Senator O'MAHONEY. I am glad you changed that phraseology.

INDIVIDUAL COSTS OF PILOT TRAINING

General ASENSIO. For them I think that we might assess a valuation for the training that has been given them between $10,000 and $20,000, depending upon whether they had their education at the Military Academy or elsewhere. Then for the fliers I think one figure that would be fairly representative would be about $50,000 per unit, the unit being the individual.

Senator O'MAHONEY. Per individual?

General ASENSIO. Yes, sir.

Senator MCCLELLAN. To train him to become a B–36 pilot, you mean?

Senator O'MAHONEY. No; we are talking about this room, now. $50,000 per individual?

General ASENSIO. Yes, sir.

General MUNDY. It would be rather difficult to say.

Senator THYE. You mean $50,000 provided they are qualified B–36 pilots. You wouldn't say $50,000 for a colonel here who has never had any flying training.

General ASENSIO. I said for rated officers. Those are flying officers.

Senator O'MAHONEY. He is answering my question as to how much has Uncle Sam invested in the military personnel in this room. His answer is that for those who are not fliers it is from $10,000 to $20,000 per individual; for those who are fliers, it is at least $50,000 per individual.

General ASENSIO. That is correct.

Senator O'MAHONEY. We are investing more in the fellows who are coming along.

General MUNDY. It is difficult to give you any figures on a B–36 pilot, for example, because you train him first in basic flying. He goes into service and qualifies as he gets more experience on heavier and more intricate equipment. He might have flown a tour of B–29's during the war. You select your B–36 pilots from pilots who have experience. That is not necessarily given in an effort to train the man, but it is gained as you use the man. You recruit the B–36

pilots from this group of qualified pilots and then given them specialized training. So it would be extremely difficult to give one dollar value for what is involved in that.

(Discussion off the record.)

Senator THYE. If I may ask one question, under project 252, "Counterpart training device," is that more than one?

Senator O'MAHONEY. That is what we have just brought out, Senator.

Senator THYE. That is the initial beginner's training, is it not?

Colonel DANY. No, sir.

Senator THYE. You still have to have the hours in the air?

Colonel DANY. You can fly the equipment.

Senator THYE. You still have to have the hours in the air. If a man is in the air, and he is there under the supervision of a skilled pilot, can he not get the same thing while he is getting the hours in the air as if you went through this counterpart-training program?

Colonel DANY. No, sir.

Senator THYE. You are all shaking your heads. The number of hours that you all fly—and I know you fly them—it just seems to me that you ought to be able to give to the other man an awful lot of information about the technical operation of that plane while you are all in the air.

Colonel DANY. For example, you are looking at the flight simulator for a single-place interceptor.

Senator THYE. What this does is to give him the technical know-how, how to de-ice, how to meet this, if an emergency occurs, how does he overcome the emergency, and so forth. That is all it does.

Colonel DANY. No, sir.

Senator THYE. It doesn't give him the technique of balancing the ship or to meet conditions in the air?

Colonel DANY. It does that, too. The flight simulator for the F–86 actually has the same pressures on the controls as the airplane has. For instance, if you go into a steep bank on the simulator, you feel the same pressures on the stick as you would if you were in the actual aircraft. It has the same rate of climb for the power settings. It exactly simulates the aircraft in flight. Therefore, not only does it permit you to give these emergency procedures which you can't give in the actual aircraft, but it also adds to his ability to fly this aircraft by instrument. In addition to that, you can also work out in this particular aircraft the intercept mission by radar control. By the use of the control panels—the middle picture on the right-hand side—an operator can interject into the radarscope in the pilots cockpit, attacking aircraft. The pilot then ranges, gets the attacking aircraft in his sights, locks on, and goes right through the whole intercept mission so that he actually shoots the aircraft down or breaks off the engagement.

Senator THYE. After a man becomes proficient according to this synthetic training, would you turn him loose?

Colonel DANY. No, sir. I would have to give him some time in the actual aircraft. But in this particular one, this is a great help, because it is a single place and there is no way of giving him actual time in that type of aircraft before you turn him loose.

Senator THYE. How many of these synthetic units are there requested in this budget? I see it now.

Colonel DANY. Page 115.

(Discussion off the record.)

Senator MCCLELLAN. Do I understand that this counterpart training simply means that you can train one quicker and more efficiently?

In other words, you can make him a finished pilot much quicker by the use of this than you can if he had to spend that much time in the air?

Colonel DANY. Yes, sir.

Senator MCCLELLAN. And do it cheaper?

General MUNDY. And you can do things that you otherwise could not do. For instance, you could have this intercepter fighter flying the F–86 in training. He is flying in the clouds and all of a sudden the training operator can put ice on his wings. He is flying by instrument and following his radar. He has to see this ice on his wings, he has to know what to do about it. In actual flight you could not simulate it. If it actually happened you might lose that pilot. Having given him this training in the trainer he is a better pilot for having had that.

RESEARCH AND DEVELOPMENT OF COUNTERPART TRAINING UNITS

Senator THYE. Who did the research in the development of these synthetic units?

General MUNDY. We have had Link trainers for 15 years, I guess.

Senator THYE. Of a nature, but nothing like this.

Colonel DANY. Actually Erco Corp. did the research and engineering on the F–86–D. There is an F–9–F naval flight simulator which has been in operation in the units for a period of about 8 months. I have an extract of the report on the operation that they had in one of their squadrons. They stated that they felt it was one of the finest training device that they had ever used in naval aviation by virtue of the fact that it allowed them to check off their pilots on jet aircraft much sooner, and they also had a better safety record.

Senator THYE. It is comparable to the wind tunnels to some extent. I mean, it is taking out the hazard of putting an actual plane into the flight or under the weather conditions and so forth so as to save the ship and to save the individual that you have already invested much in, and it is a human life saved. That is the purpose of this?

Colonel DANY. That is the purpose.

Senator O'MAHONEY. Senator Thye, I think I ought to say that our witness had a terrible experience. He was attempting to land and did not realize that his wings were iced so he had a crash landing. Fortunately he was in the simulator.

Now let us have the description, please, of this procurement program, how you determined the number of these synthetic devices for the Air Force.

TRAINING SIMULATORS REQUESTED

Colonel DANY. On the left-hand side of this chart we have indicated the type of flight simulator. Of course, the type of flight simulator is directly associated with the type of aircraft we are actually using in the Air Force. The horizontal green line indicated an actual group. The beginning of the line indicates when these groups will be activated. This line which I indicated is one which is already activated. These are groups that will be activated in fiscal year 1952. These units will

be activated in fiscal year 1953. So the start of the green line tells you when the unit comes into being.

Red line indicates a school which will be in being to train the pilots.

(Discussion off the record.)

Colonel DANY. The radio and radar trainers which we are procuring under this project are: First, a gun-laying radar trainer which will allow us to train on the ground operators of the radar sighted guns. We also will have trainers which will allow an operator on the ground to do the navigation and bombardment missions. We find that that has to be done because it saves time in the air, and also permits us to stop the mission as it is being conducted so that we can correct the students' errors.

(Discussion off the record.)

Senator THYE. How long do you need to teach a man the use of this equipment?

Colonel DANY. On the ground, an aviator going through our courses now actually has a year's course in which he receives about 150 hours in the air. He receives approximately 60 hours on this type of equipment as a supplement to his air training.

Senator THYE. So that this equipment here would be used about 60 hours for the one individual, and in order for you to have a sufficient number to train what you anticipate will be your training program, you must have this number. You could not get along on one-half of the number and still come up with the trained manpower?

Colonel DANY. Not if we give them the required time. Of course you can always cut down the required time. But we have figured out our courses and have set it up so that this is the maximum amount of benefit which we can receive from this type of equipment as opposed to training in the air.

(Discussion off the record.)

UNIT COSTS OF RADIO AND RADAR TRAINERS

Senator O'MAHONEY. The unit costs of these radio and radar trainers ranges from $250,000 for the most expensive, to what on the low side?

Colonel DANY. The lowest item is a radio and radar projection oscilloscope, which is quite some name, but it is really just a large tube which blows up the presentation that man gets on his radarscope, which is only about 5½ inches or so in diameter.

Senator O'MAHONEY. That costs how much?

Colonel DANY. $2,700.

Senator O'MAHONEY. That is the least expensive, $2,700. How many of those?

Colonel DANY. We are buying 37 of those, sir.

Senator O'MAHONEY. The average unit cost for all of the units?

Colonel DANY. $65,929.

Senator O'MAHONEY. You have an answer for almost every question we ask. Are there any other questions?

Senator THYE. Senator, he has not answered for every one of mine. But I am not sure that I could disagree with him if I wanted to.

Senator O'MAHONEY. One thing is perfectly clear. These gentlemen, and it is true of the other services, too, have done a lot of very competent work to present the budget which they are presenting.

AERIAL TARGETS

Senator McCLELLAN. Are you going to cover aerial targets?

Senator O'MAHONEY. That is the next one, page 115.

Colonel DANY. That relates to aerial targets and related equipment.

We have two types of targets we are procuring under this project. The first target is what we call the OQ pilotless controlled-aircraft target. You can get an idea of the dimensions by noting the picture and making a comparison with the man standing by the target.

This is a picture of the target sitting on a maintenance stand. This is the target launched by catapult, and this illustrates another method of launching in which the unit goes around on a circular path and it is launched into the air as it gains speed.

This particular type of target permits us to train gunners on an actual live target. We fire at it and they bring it down. A large portion of the missions, however, are flown actually without live ammunition being shot at it. We bring it in over a series of turrets on the ground. Aerial gunners operating turrets which they will operate in the air get actual practice at a plane coming in on the various fighter attack patterns.

Senator O'MAHONEY. If you do not have live ammunition, how does the gunner know or how does the instructor know whether or not the gunner is making a hit?

Colonel DANY. I made the point that we do not use it on all the missions, but we do use live ammunition. They have no way of telling when only tracking but—it gives them good practice. Later they actually shoot live ammunition at it and they can tell whether what they are doing is correct.

This is the A–1 wing target. This target is towed behind a towing aircraft and can be towed up to speeds around 450 miles per hour. It gives the pursuit or fighter pilot a chance to fire at a three-dimensional target.

This target also will give a radar return, and in addition to that we have now a project in mind to actually put a scoring mechanism on it so that as the bullet travels in the vicinity of the target it is picked up on a radar field and can be scored.

Both targets are recoverable. We get about 8.5 missions out of the one, and about 11 missions out of the other. The A–1 target is brought down and landed behind the airplane on the ground. A parachute comes out and stops it from overrunning the towing aircraft.

Senator O'MAHONEY. This is not a new device?

Colonel DANY. We have been using these for several years.

Senator O'MAHONEY. How does our training compare with training of aviators in other countries?

(Discussion off the record.)

AMOUNT FOR AERIAL TARGET

Senator O'MAHONEY. The estimate for aerial targets is $4,600,000, which is geared into the 95-wing Air Force?

Colonel DANY. Yes, sir.

MAJOR PROCUREMENT, OTHER THAN AIRCRAFT

Senator O'MAHONEY. Now we come to program 270. This is for a total of $252,580,000.

Thank you very much, Colonel Dany. You are a very good lecturer.

(The information referred to is as follows:)

STATEMENT OF MAJ. GEN. GEORGE W. MUNDY

BUDGET PROGRAM 270. OTHER MAJOR EQUIPMENT, OTHER THAN AIRCRAFT

Mr. Chairman and members of the committee, this program 270, "Other major equipment," covers the procurement of major complete end items of meteorological, radiological, photographic, printing and reproduction, test, flying field, shop, and utilities equipment, including first year's spares requirement where such spares are normally furnished with the end item.

The need for the most scientifically advanced meteorological equipment is being conclusively demonstrated by Air Force experience in Korea where accurate weather forecasting is indispensable to the success of air operations. While strategic bombing with radar devices is not necessarily hampered by weather conditions, strategic targets in Korea were few and have been liquidated. GHQ estimates based on prisoner-of-war interrogation and preliminary field reports have credited air power with 47 percent of all enemy casualties in the Korean War. This has been possible largely through low-level operations with rockets, strafing, and napalm bombs. Close support of ground troops, all low-level flying in the hilly Korean country, requires visible flight conditions. The times the weather is going to be favorable for such operations—whether day or night—must be accurately forecast so that the advantage can be taken. Forecasting weather in Korea is particularly difficult because the forecasting must be done at long range since Korean weather generates in Siberia and moves from the west toward the east and locations for meteorological stations are, of course, not available in Siberia. Every long-range flight cruise is based on weather, icing, turbulence, and all factors must be known. Recent advancements in techniques have enabled the forecasting at long range of winds aloft or pressure gradients. While flying great circle routes is ordinarily the shortest distance, flying by pressure-gradient route, while farther in distance, may save hours by taking advantage of the predicted favorable winds.

Local civilian-defense organizations are planning defense against atomic attack, and radiation counters and detection devices are finding civilian markets. As you know, the Air Force must be equipped to handle atomic weapons and must carry out intensive training of radiological offense and defense teams with the latest equipment. Aircraft which are to carry the atomic bomb must be equipped with the utmost in protective devices. Many systems must be installed in an airplane to search out lethal clouds and radioactivity contamination present in the atmosphere. When an installation commander's crews are coming down with radiation sickness, it is too late to start thinking about buying detection devices to find out why. Mere token instrumentation and a few personal protective devices will not do.

New developments in the field of aerial photography continue to be made and many new and highly important uses are being made of aerial photography in the Korean War. In this estimate is some special equipment for use in the operation of the Air Force Photographic Test Center. This activity photographs all types of tests made by the Air Force, for example, dropping a 2½-ton truck from a flying aircraft. Photographing every detail of such a test provides data for determining failures or for suggesting improvements. Such pictures save money by reducing the number of separate tests required. This activity takes all pictures of guided-missile tests and atomic-weapons tests. All photographs are kept in file for future reference.

The Air Force is permitted under the Joint Committee for Printing to have certain printing plants. Part of the printing and reproduction equipment in this estimate is to carry on modernization of printing plants under an approved 3-year plan. Also, the Air Force program calls for additional reconnaissance technical squadrons whose job it is to print aerial mapping and target material in forward areas; equipment to outfit one of these squadrons costs approximately $60,000.

Many precision-testing devices are required to check and test many complex components of today's high-performance airplanes. Consider a jet engine, the rotor of which rotates at speeds up to 12,000 r. p. m.; the balance obviously must be perfect. A jet engine uses a complicated fuel-control system which requires that it be accurately calibrated for altitude, density, and pressure; three separate testing devices are needed to test this system: A fuel-control test stand, an emergency-control test stand, and a starting-control test stand. If starting sequence in a jet engine is not controlled, there is danger of burning out the combustion chamber due to accumulation of fuel gas without ignition being supplied. The starting-control test stand simulates all conditions found when the fuel system is installed on the engine and you can be sure that when installed, it will work right and without danger of damage to the engine when it is started. At the front part of a jet aircraft is a sensing element which transmits to the engine's fuel meter conditions of altitude and speed—factors which affect fuel requirements of the engine. This sensing device must be accurately calibrated and a test stand supplies simulated altitudes and speeds. While it is possible to test the fuel-control system by running the engine, it is cheaper to do all this work on testing devices and thus save time on the engine. The compressor and turbine rotor in a jet engine is of large mass and at high speed a little imbalance soon becomes a big imbalance—the rotor is the life of the engine and its balance must be perfect. The dymetric balancing machine to test rotor balance costs $27,000, as presented in the budget equipment list. The Air Force has begun a program to perform minor overhaul on jet engines at base level. To enable this, a portable test stand has been built which has separate testing devices to measure thrust, vibration, fuel flow, tail-pipe temperature and fuel line and oil pressures. While I have mentioned test equipment for only jet engines, all components of aircraft require special test equipment; the bombing and fire-control system, the communications equipment, hydraulic system, and all instruments.

Flying field and shop equipment needed by the Air Force might be compared to equipment in a modern garage where you see cylinder grinders, hones, wheel aliners, hoists, air compressors, lubrication equipment, etc. But, to service aircraft, such equipment is much more complex and quantities multiplied many times. The Air Force is faced with problems such as working on the rudder of a B–36 which stands in height about equal to a four-story building; a suitable mobile structure which will provide safe working space is a necessity; this is a big expensive piece of equipment but we can't do without it. Now that automobiles are equipped with various types of hydraulic drives and torque converters, garages have had to get new equipment to work on these complex devices. Similarly, constant technological improvements on aircraft and their many components require that handling and repair equipment keep pace. For example, starting a jet engine at zero temperatures requires a power-plant starter which will generate about 1,000 amperes, which is in itself a formidable piece of equipment; the tactical necessity of providing for simultaneous take-off of a whole squadron or the wide dispersal of aircraft, as in Alaskan bases, multiplies the quantities of each item required.

The next project in this program covers utilities equipment such as a portable, prefabricated, refrigerated warehouse for subsistence and supplies needed by outlying combat squadrons. Another item, air-conditioning units, is required at aircraft control and warning sites to provide temperature and humidity control to insure proper operation of sensitive electronic equipment. Water-purification equipment in sizes adaptable to a few men or a squadron, are needed to provide safe drinking water in forward areas.

Most of this equipment is for initial equipping of new wings coming into the Air Force, and a lesser part for replacement. It is all essential to operation of aircraft. Whatever the number of excellent aircraft the Air Force may have, it will not compensate for lack of equipment necessary to handle and maintain them.

There are pictures of this equipment available for your use during your review of each project.

EQUIPMENT PROGRAMS

Senator O'MAHONEY. I point out the flying field and shop equipment, 276, because there you dropped from $205,565,000 to $156,754,000.

General MUNDY. Colonel Mullins, from Air Matériel Command.

(The information referred to is as follows:)

STATEMENT OF LT. COL. J. A. MULLINS

PROJECT 221. METEOROLOGICAL EQUIPMENT

Mr. Chairman and members of the committee, the estimate for project 271, "Meteorological equipment," is contained on pages 123 through 124 with the amount requested $3,202,000 on page 123.

The funds in this project are required for the procurement of complete ground installed and airborne meteorological equipment such as airborne turbulence indicators, cloud base and top indicators, radiosonde ground receptors, and many other types of equipment required by the Air Weather Service in the support of the Air Force mission. The major requirements in this area are for the ground-support equipment, quantities of which are predicated on the number and types of weather stations operated by the Air Weather Service. These items of airborne equipment in general are dependent upon the number of aircraft to be used as weather reconnaissance ships. The Air Weather Service is operated for the purpose of providing weather data for the Air Force in aid of aircraft operation and to insure the maximum safeguarding of life and property.

It further provides weather data and other meteorological service to the Armed Forces; the United States Weather Bureau, and the Navy Aerological Service; in the joint operation of the WBAN (Weather Bureau Army-Navy) Weather Center; in the interexchange of weather data; in making available tie-ins with the weather map facsimile networks facility; and coordinates on common meteorological requirements, procedures, methods, and other phases of allied geophysics. Even the peacetime operation of the air weather facilities is based upon the normal operation of 24 hours a day and 7 days per week, service observation stations making observations hourly. Upper-air rawin and radiosonde observations are taken four times daily, as are sperics observations. Storm-detection observations are taken eight times each day.

Weather reconnaissance flights are normally made on the basis of three 16-hour flights each 2 days by each squadron. In addition to the above normal scheduled activities, the Air Weather Service is as rapidly as possible increasing its activities, in high altitude, upper-air observation and their allied geophysics fields.

Although, as previously stated, the requirements for these various meteorological equipments have been directly associated with the number of weather stations to be in existence, and these stations are programed to be in support of the 95-wing Air Force, it must be realized that in this particular field, the ratio of decrease and increase in weather stations cannot be directly correlated with increases or decreases in the number of Air Force wings. The major reason for this is the fact that as long as the Air Force has a global concept of operation, no matter how many groups are involved in this tactical concept, a definite number of air weather stations will have to be strategically located in accordance with this concept. Of course, a radical increase in the programed Air Force naturally results in increased equipment requirements for the Air Weather Service.

STATEMENT OF LT. COL. NEELIAN O. NELSON

BUDGET PROJECT 272. RADIOLOGICAL EQUIPMENT

Mr. Chairman and members of the committee, the estimate for project 272 appears on page 125. The amount requested, $9,905,000, will provide for the procurement of major items of radiological equipment required to continue the development of the Air Force capabilities for radiological defense.

This program has developed since the inception of atomic agents in 1945. Inasmuch as the radiological area is at the present time in the development, testing, and evaluation stages it is anticipated that as the program progresses through these stages that this project will expand in consonance with the over-all radiological concepts. The development of new items in this project will continue to progress as further developments in this area continue, and will generate further requirements in subsequent estimates.

The Air Force requires radiological equipment for several purposes:

(1) Protection of air crews in flight.
(2) Protection of troops on the ground.
(3) Offensive and defensive action against an enemy.

The airborne equipments installed in aircraft are for either protection or detection against radioactive contamination. The survey instruments used in ground defense are portable devices for detection of radioactive elements.

In determining the requirements for procurement of these items the following basic factors have been considered:

(1) Analysis of 95-wing aircraft program by airplane type.
(2) Proposed military strength under 95-wing program.
(3) Average estimated life of equipment.
(4) Average estimated base level stockage allowance and key depot spares.

STATEMENT OF LT. COL. J. A. MULLINS

PROJECT 273. PHOTOGRAPHIC EQUIPMENT

Mr. Chairman and members of the committee, the budget estimate for project 273, "Photographic equipment," is contained on pages 126 through 129 with the amount requested, $31,572,000, shown on page 126.

Funds requested in this project provide for the procurement of Table of Organization and Equipment, Table of Allowance, and some aircraft installed equipment for the 95-wing Air Force. The aircraft installed equipment included in this project is only that required for installation on the aircraft scheduled to be withdrawn from storage and placed into active service between now and July 1, 1952. This project includes new models and types of photographic equipment replacing that presently in use by the using organizations. Equipment presently in use is being replaced by attrition only and present plans are that no photographic item will be declared obsolete and disposed of by the Air Force.

Due to the advancements made in the performance of our present-day aircraft, World War II photographic equipment has proven woefully inadequate. Cameras that would operate from our B–29's or P–38's will not perform at the altitudes or speeds of our B–36's and F–84's. This new equipment is being procurred and placed in use just as fast as possible.

In computing the requirements for this equipment it was necessary to procure duplicate equipment in some cases. An example of this is where the normal installation for a reconnaissance plane might call for three K–48 cameras to be used for normal high-altitude operation with an alternate installation of an S–11 or K–47 camera for low altitude or night missions. We have not included 100 percent duplication of equipment for these alternate installations; however, minimum quantities of these items have been included. This system allows the Air Force to operate with far fewer planes rather than have a plane specialize in only one phase of the over-all photographic mission.

Of major interest in this area is the development of aerial film-processing machines which now make it a matter of only a few hours from the time a photograph is taken over enemy territory until it is placed on an intelligence officer's desk for his interpretation and study. These machines are large, costly items but it would be impossible to process, under our old system, the film obtained from a RB–36 photographic mission in sufficient time to be of value to a theater commander. The size of this film and the length of the roll precludes the possibility of processing it by hand as was done in World War II. Wherever possible and practicable, it has been the policy throughout the development of these items to use such existing components as lens, cones, bodies, etc., which can be incorporated in the new item thus reducing the over-all cost and delivery time for these newly developed items.

STATEMENT OF R. C. RICHTER

BUDGET PROJECT 274. PRINTING AND REPRODUCTION EQUIPMENT

Mr. Chairman and members of the committee, the estimate for project 274 appears on page 130. The amount requested, $3,110,000, will provide for the procurement of complete units of printing and reproduction equipment, such as composing machines, printing presses, binding equipment, and other types of related machinery and equipment required in the operation of tactical and nontactical field printing plants.

The program of replacement of unserviceable and obsolete equipment was inaugurated in fiscal year 1950, as recommended by the congressional Joint Committee on Printing. Based upon a survey of the condition of equipment, this estimate provides for the continuation of the phased equipment replacement program through fiscal year 1952.

Augmentation is provided in this estimate to increase the capacity of certain field printing plants, to strengthen sections and to add newly developed commercial equipment designed to process work currently performed manually. The aug-

mentation will be carried out in accordance with instructions of the congressional Joint Committee on Printing, regarding expansion of Government field printing plants.

Based upon the current expansion program, there are included field printing plants for tactical units. These plants will provide necessary printing support for reconnaissance technical squadrons and psychological warfare squadrons, while operating in the field. They will process maps, target charts, and psychological warfare materials.

In addition, two field printing plants are included for nontactical use, based upon increased command requirements for printing which cannot be obtained from commercial sources. Authority for the establishment of Air Force field printing plants is not requested until the area of the proposed installation is surveyed to ascertain the availability of commercial or Government printing facilities for servicing Air Force requirements.

STATEMENT OF LT. COL. J. A. MULLINS

PROJECT 275. TEST EQUIPMENT

Mr. Chairman and members of the committee, the estimate for project 275 will be found on pages 133 through 135 with the amount requested, $31,698,000, shown on page 133.

This project provides for the procurement of complete laboratory and test equipment such as gyro testers, propeller test stands, vacuum test chambers, analyzers, etc. These requirements incorporate those equipments that are used by the tactical organizations in the field and on the flight line as well as the more complex types of test equipment employed in our major overhaul depots.

This estimate is to provide new items of equipment in connection with the testing of the latest type of bomber, fighter, reconnaissance, and troop-carrier aircraft, and their components and accessories. Therefore, due to the long procurement lead time for this equipment and the necessity of having this equipment available to meet the requirements of those organizations to be activated during the program build-up, it is apparent that the dollars being requested are essential in order for the Air Force to perform its assigned mission.

The generator test stand, type A–1, is one of the most essential pieces of test equipment in this project. This stand consists of a variable-speed motor drive with mounting base, blower, test bench, test cabinet, and test panel. This stand is designed for use indoors or outdoors for extended periods of time and at the present time it is in the process of standardization between the services.

Development and distribution of equipment within this area must at all times be geared to the technological advancements that are being brought about in the field of new aircraft and other Air Force equipment. Changing strategic and tactical concepts necessitates continuous evaluation of military equipment in the fields of high altitude, high speed, and global operations. Accordingly, new test equipment must be developed to insure that the necessary maintenace support will be available. Also included in this estimate are requirements to affect replacement of worn-out test equipment. These replacement quantities have been determined through the application of replacement factors developed through records of equipment actually in use.

With the funds as requested in this project, the Air Force will be able to meet the programed objective for fiscal year 1952 for initially equipping the 95-wing Air Force.

BUDGET PROJECT 276. FLYING FIELD AND SHOP EQUIPMENT

The budget estimate for project 276 is listed on pages 136 through 139, with the total amount requested, $156,754,000, shown on page 136.

This project will provide for the procurement of flying field and hangar equipment such as portable hoists, jack assemblies, portable power plants and heaters, shop and warehouse tools and equipment, such as spray booths, air compressors, drill presses, lathes, welders, etc.

The equipment in this project, as in most others, is authorized to individual bases and organizations by appropriate tables. However, in this particular project there is a much closer relationship to the actual type and model of aircraft being used. This fact is brought about through the direct association of individual items to one type or model of aircraft. An example of this would be: All fighter squadrons may be authorized one power plant per three aircraft assigned. However, since many of our power plants can only be used with certain type air-

craft, the actual type authorized to this squadron would be dependent upon the type of aircraft they were actually flying. An example of this project is the N–1 dolly which was designed and developed to effectively accomplish the loading of the special-weapon bomb in appropriate bombardment aircraft. The dolly's construction has specifically considered the necessity of transfer by air with expeditious reassembly at the operational site. Each dolly is provided with a screening attachment to prevent the unauthorized disclosure of the special-weapon configuration. This dolly is essential in all phases of special-weapons handling and constitutes a keystone in the special-weapons strategic-bombing concept.

The development and usage of this equipment must parallel at all times the development and distribution of the various models of aircraft. In addition to the requirements to initially equip the newly programed organizations, there is also included the requirements for replacement of the equipment that will be lost through usage during the budgetary period.

Since the items included in this project are of a reparable nature, allowances have been made for existing reparable stocks to the extent that they can be repaired and returned to serviceable condition.

Although it has been pointed out previously that many of these equipments are peculiar to types and models of aircraft, this is not necessarily applicable to all items included in this project. Some of the equipment that falls into the category of shop and warehouse tools and equipment is very general in usage and, as such, may be found in many different type organizations.

With the funds as requested in this project the Air Force will be able to meet the programed objective for fiscal year 1952 for initially equipping the 95-wing Air Force.

PROJECT 277. UTILITIES EQUIPMENT

The budget estimate for project 277 is listed on pages 140 and 141 with the total amount requested $3,957,000 shown on page 140.

This project provides for the procurement of major items of utilities equipment such as ice plants, water-purification units, and other items of a portable nature for field use. Items for fixed installations are excluded from this project. Requirements for this estimate are based upon the additional number of facilities to be activated and units subject to overseas deployment.

The equipment in this project is essential in the operation of Air Force bases and organizations both in the zone of interior and overseas. As an example, water-purification units are issued to organizations scheduled for overseas deployment. These units are used for purification of water for photographic reconnaissance units in forward areas. An air-refueling squadron which would operate from our more isolated areas will be equipped with one water-purification set No. 1 per multiengine aircraft. This is a small set designed to furnish water for the crew of the aircraft.

An item which is required in the operation of our isolated stations is water distillation units. These units are essential for those organizations stationed adjacent to salt water. These units will produce from sea water 6,000 gallons of fresh water each 20 hours of operation. This amount would maintain 1,200 men for full operation indefinitely as the medical authorities specify 5 gallons of water per man each day for field use.

Another critical item in this area is the refrigerated warehouses which are used for the storage of perishable food and supplies in overseas areas. These units are issued only to the food service and supply squadrons in tropic and semitropic areas.

As is shown by these examples, the items in this project are essential for the operation of Air Force units in forward areas. The items listed are primarily for the health and welfare of the troops and are of utmost importance in maintaining the efficiency of our Air Force units overseas.

STATEMENT OF LT. COL. NEELIAN O. NELSON

BUDGET PROJECT 299. CLASSIFIED PROJECT

Mr. Chairman and members of the committee, the estimate for project 299 appears on page 142. The amount requested, $12,382,000, will provide for items of a classified nature. Detailed information pertaining to this project will be furnished if requested.

PROCUREMENT LEAD TIME

Colonel MULLINS. I would like to comment on the fact that the 1952 estimate is smaller than 1951. The 95-wing program, the objective for accomplishment of that complete program is the end of fiscal 1952.

In this particular area the lead time on the items, that is procurement lead time—the time involved from the outset of a procurement document until the item was delivered—is such that we have the major portion of the funds in the 1951 estimate in order to have as much of that equipment on hand as we could by the end of this fiscal year.

Senator O'MAHONEY. What is the lead time?

Colonel MULLINS. It varies by item. It ranges from 8 months to approximately 2 years. There are some of the newer developed items that actually before we can get deliveries on them will be 2 years before the first articles will be delivered.

Senator O'MAHONEY. What percentage of deliveries have you had on the obligations of 1951 in the amount of $205,565,000?

Colonel MULLINS. I could not give you an exact percentage. I think it would be very small. Actually, deliveries on items procured from fiscal 1951 fund. Less than 20 percent of the total will be actually delivered.

Senator O'MAHONEY. Then you are not beginning yet to get deliveries on the long-lead type of items?

Colonel MULLINS. That is right.

Senator O'MAHONEY. What are the long-lead items of flying field and shop equipment?

Colonel MULLINS. This equipment, Mr. Chairman, is very comparable, only on a larger scale than the shop equipment you would see in the commercial garage.

In other words, we do maintenance on the aircraft. The equipment itself is larger but it is comparable in the mission which it is designed to perform.

We have in this estimate, for instance, power plants for starting aircraft. Some of the lead time problems we have had with some of these particular plants, through the development stage and through the stage of actual procurement in getting the production schedule set up where we could actually realize anything from deliveries, would approximate 3 years.

Of course we are in position on most of those power plants to be able to reorder additional quantities against the procurements that were initially set and the lead time would drop considerably.

EXPANSION PROGRAM

Senator O'MAHONEY. Am I to understand that the $156,754,000 in the 1952 estimate is designed to enable you to pay for the program which was planned, and on the basis of which the appropriations for 1951 were made?

Colonel MULLINS. A portion of it.

Senator O'MAHONEY. Part of it is for expansion beyond that, is that right?

Colonel MULLINS. Yes, sir. In project 276, flying field and shop equipment, the requirements which are to be financed in fiscal year 1952, that were carried over from fiscal 1951, are $60,000,100.

Senator O'MAHONEY. Will this take care of the 95-wing group?

Colonel MULLINS. It will not entirely furnish the support necessary for a 95-wing group. However, the funds here will enable us to procure and to put on procurement the quantities that we can get delivered within the period of time here, between fiscal 1952 and the end of fiscal 1953.

Senator O'MAHONEY. Sufficient?

Colonel MULLINS. It is a problem of scheduling the budget requirements or fund requirements in accordance with the actual capabilities of production to deliver.

Senator O'MAHONEY. I do not understand whether or not it will be sufficient.

General ASENSIO. No, sir. There is $90,000,000 still required for a 95-wing Air Force.

General MUNDY. $90,164,000, to be exact.

This is for the entire 270.

TEST EQUIPMENT

Senator O'MAHONEY. Would you say a word about the test equipment?

That is down, I see.

Colonel MULLINS. Test equipment is used primarily to test the condition of the items of equipment that are on aircraft that must be operational, must be in good condition in order for the aircraft to fly. So this test equipment is again, if I may use the example of a garage, it is comparable to the machine which they will put on the different components of an automobile engine to test whether or not they have the proper pressure on the cylinders, and so forth.

Some of the test items are related to the operational elements of the aircraft, such as landing gear, hydraulic pressure, and so forth, to test that pressure to see if it is capable of letting the aircraft fly and perform its mission.

RADIOLOGICAL EQUIPMENT

Senator O'MAHONEY. Radiological equipment, will you tell us something about that? Protection of air crew in flight, protection to troops on the ground, necessary for offensive or counteroffensive action against the enemy.

General ASENSIO. Colonel Nelson, from Headquarters, United States Air Force.

Senator O'MAHONEY. Thank you very much, Colonel Mullins.

Colonel NELSON. Mr. Chairman, members of the committee, essentially there are five different kinds of items in this radiological equipment.

(Discussion off the record.)

Colonel NELSON. Two familiar instruments that are in this estimate are the ordinary Geiger counter and an ionization type of instrument which measures up to a lethal range. That is $500,000 of the estimate. The balance of the estimate is for the classified items.

PHOTOGRAPHIC EQUIPMENT

Senator O'MAHONEY. We are coming to photographic equipment, $31,572,000. I note the itemized list on page 127, which indicates what a prominent place photography plays in the operation of an air force.

I do not think this will require very much time, Colonel. Give us a quick summary of that. Is there continuous improvement in the type of equipment that you buy, particularly cameras?

Colonel MULLINS. Yes, sir, especially airborne equipment that we are procuring. There is a continual improvement in the accomplishments of that equipment in what we can do with it and what we can get in the way of intelligence from pictures taken behind enemy lines and what we can get in the way of detail as to what is on the ground from an extremely high altitude.

Senator O'MAHONEY. What is the item 12, camera identification?

Colonel MULLINS. I would like to ask Mr. Poland to comment on that. He is from the Matériel Command, Allied Equipment Branch. They handle the photographic equipment.

Senator O'MAHONEY. Apparently that is not in the schedule for 1952.

Colonel MULLINS. No, sir. That item was procured in 1951.

Senator O'MAHONEY. What is the camera, identification?

Mr. POLAND. I am Mr. Poland, of headquarters, Air Matériel Command. An identification camera makes these little identification badges.

General MUNDY. It is for security purposes on badges.

Senator O'MAHONEY. So you are fully equipped with identification cameras.

Mr. POLAND. Yes, sir. Through fiscal year 1952.

Senator O'MAHONEY. Kit photo interpreters, total cost of $417,000. What does it do?

Colonel MULLINS. The photographic interpreter kit is a kit that has all of the necessary equipment in it for the intelligence people, who are primarily charged with that function, to take the photograph that has been actually made and interpret that photograph in terms of what actually lies on the ground and where it is.

It contains chemicals and glasses of different types to look at these different photographs. I have a folder on it.

Senator O'MAHONEY. How would you apply a chemical to a photograph to bring out an interpretation?

Colonel MULLINS. I am not too familiar with the equipment itself, Mr. Chairman; I think Mr. Poland can give you more information on that.

Mr. POLAND. The chemicals used here would be something along the line of what you might see by putting red on top of it. Certain terrain would be taken out if it were a color photo.

Colonel MULLINS. Also, you can get a three-dimensional projection by the use of the lens.

Senator O'MAHONEY. How large is this kit interpreter?

Colonel MULLINS. Here is a picture of it, sir.

Senator O'MAHONEY. All those different items are used by the persons who survey or examine the photographs in order to determine what they mean, what they contain?

Colonel MULLINS. That is correct.

We have individual folders and pictures of most of the equipment in here, if there are any other items that you would like to see pictures of.

Senator O'MAHONEY. For $31,500,000 you are operating like a television studio, I would say.

Colonel MULLINS. The photographic mission of the Air Force is one which is of very prime importance because of the intelligence factor.

Senator O'MAHONEY. That is perfectly obvious.

Then you have the printing and reproduction equipment which of course is central, and requires no explanation.

I think we have discussed the test equipment.

Utilities. These, I take it, are for bases and camps?

Colonel MULLINS. Bases and organizations. It is authorized equipment that is necessary to the accomplishment of a particular tactical organization's mission.

Senator O'MAHONEY. I have no further questions on this matter. Thank you very much, General.

General ASENSIO. Our next appropriation for consideration, Mr. Chairman, is "Maintenance and operation."

This appropriation includes the funds for operation of aircraft, organization, base and maintenance equipment and supplies; logistical support; training support; operational support (strategy and tactical); research and test support; medical support; service-wide support.

In brief, this is the appropriation which takes care of our every day expenses and enables our continued operation once the procurement has been effected and the personnel in uniform have been provided for.

General Mundy is our principal witness in the area of programs 410, 420, and 430.

AIRCRAFT SPARES AND MODERNIZATION AND MODIFICATION OF AIRCRAFT

STATEMENT OF MAJ. GEN. G. W. MUNDY, CHIEF, SUPPLY AND MAINTENANCE DIVISION, AIR MATÉRIEL COMMAND, ACCOMPANIED BY LT. COL. J. A. MULLINS, DEPUTY FOR BUDGET AND REQUIREMENTS, DIRECTORATE OF SUPPLY AND MAINTENANCE; COL. L. B. OCAMB, ASSISTANT FOR PROGRAMING, DCS/OPERATIONS; CAPT. C. D. VOLLMER, DIRECTORATE OF BUDGET, DCS/COMPTROLLER; LT. COL. R. S. THOMPSON, DIRECTORATE OF MAINTENANCE, SUPPLY AND SERVICES, DCS/MATÉRIEL; COL. O. O. SCHURTER, AIR MATÉRIEL COMMAND; AND MR. ROBERT RION, DIRECTORATE OF BUDGET, DCS/COMPTROLLER

AMOUNT REQUESTED

General MUNDY. If you will turn to page 198, we have a summary where we show our requirement for 1952 at $3,238,700,000. The first projects are 411 and 414.

Four hundred and eleven covers aircraft spares and 414 covers minor modification and modernization of aircraft.

Senator O'MAHONEY. There is a statement here on page 197 which I think needs just a little amplification. It says:

Estimated obligations for fiscal year 1951 total $3,072,539,482 to cover the costs incident to the Korean War, and subsequent changes in national defense policy culminating in the determination to build up the 95 wings as fast as practicable.

Do I understand that to mean what it says, that obligations for 1951 were designed to cover costs incident to the Korean War?

General ANSENSIO. Yes, sir, for 1951, but not for 1952.

Senator O'MAHONEY. $3,238,700,000 is requested for 1952, and this does not include anything for Korea?

General ASENSIO. That is correct.

Senator O'MAHONEY. So that the breakdown on page 198 covers the maintenance and operation without regard to the Korean War?

General ANSENSIO. Without regard to the Korean War, without regard to the pay-as-you-go policy in Japan.

Senator O'MAHONEY. All right, sir.

General MUNDY. On page 201 we have program 410 showing what we are asking for in projects 411, 412, and 414.

Senator O'MAHONEY. Aircraft maintenance, spares, spare parts, and supplies, fuel and oil, minor modification.

On what method do you make the computation of the aircraft maintenance spares?

Senator THYE. This minor modification, is that modification of planes you are taking out of storage now?

General MUNDY. No, sir. When you take them out, that is covered by another project. But within the Air Force, there are little things in aircraft that have to be fixed. Or you can change this to a slightly different configuration and do a better job.

This is related to the money that is in the 100 series. This is minor. It is just an arbitrary division for budget purposes of minor and major.

We base our future requirements on our past experience. You can pretty well anticipate that in an aircraft which has been delivered for a year that you are going to have to spend so much to keep it usable.

(Discussion off the record.)

(The prepared statement is as follows:)

STATEMENT OF MAJ. GEN. GEORGE W. MUNDY

BUDGET APPROPRIATION 400

Mr. Chairman and members of the committee, before your examination of the budget appropriation for "Maintenance and operation," I would like first to explain briefly the Air Force logistic system. As you probably know, it is the Air Matériel Command at Wright Field in Dayton, Ohio, which supports all other commands and activities of the Air Force, world-wide logistically.

The Air Force logistics system is built around the Air Matériel Command zone of interior supply distribution and maintenance depots. As the Director of Supply, Maintenance, and Services at Air Matériel Command, it is my job to so manage this logistics system as will insure that there is made available always, the supplies and equipment to tactical and training units of the Air Force which will enable them to attain necessary latitude of action to accomplish this mission.

The equipment which you reviewed in the program for major procurement other than aircraft is received, distributed, controlled, and maintained through the Air Force depot system, as are also the supplies and the minor equipment covered by the projects in the maintenance and operation program next in line for your review. Other projects in this program are for the personnel who do the depot supply and maintenance work, personnel who operate and maintain the depot, and other projects for necessary services incident to the logistics operation.

The organization of the Air Force supply and maintenance system consists (organization chart) essentially of the directorate office and supporting divisions

at Wright Field and eight air matériel area depots having both supply and maintenance functions, and five supply storage or specialized depots.

This (photo of San Antonio AMA) is an aerial photograph of our depot at San Antonio, Tex. Here we have both supply warehouses and extensive facilities for repair and overhaul of aircraft, accessories and other equipment.

This (photo of Eight Hundred Thirty-first AF Specialized Depot) is our depot at Shelby, Ohio, and here, only supply work is carried on. This depot specialized in Air Force blue clothing and in rubber materials.

We speak of area depots (two zone map) since each depot is assigned the responsibility for support of all AF activities in a given geographical area for all supplies of common usage. However, we also assign to depots a certain group of items in which they specialize in supply and maintenance. For this purpose, we have divided the United States into two zones at the Mississippi River and one depot in each zone is thus responsible, for example, for maintenance and supply requirements of F–9 Autopilot for the whole zone. The Air Force system of distribution of material is simple and direct—purchased supplies move from manufacturer to the zone depot and then to bases and organizations as requisitioned or, from manufacturer to wholesaler to user. We attempt to schedule deliveries so that we have on hand in depots a stock level sufficient for 4 months' consumption. To take care of our distribution to oversea activities, we have set up Sacramento, Calif., Middletown, Pa., and Mobile, Ala., as out control points. These depots monitor incoming requisitions—fill those for common items and those items in which they specialize and forward on to other depots, and the requisitioned items in which they specialize. The control points maintain follow-up on these requisitions to insure that oversea requirements are speedily fulfilled.

At our supply depot at Shelby, Ohio [photo of interior of Eight Hundred and Thirty-first Specialized Depot] we have installed a modern industrial-type production line to speed up large-scale handling of supplies. This picture shows a part of a continuous 2,000-foot system of overhead conveyors which has reduced costs, increased efficiency, enabled an effective utilization of manpower and has stepped up our ability to make speedy world-wide deliveries. Here [second photo of Eight Hundred and Thirty-first Specialized Depot] is another shot of this supply operation at the Shelby Depot.

In this picture [photo showing binned stock] you see binned stock in a supply warehouse and the people who are picking stock to fill requisitions.

In this picture [photo of stock control office] are the supply people in an office handling requisitions and generally managing the stock-control work.

During the last 12 months ending April 1 of this year, depots handled requisitions for 22,960,000 items, they handled in and out 3,250,000 tons of material not including fuel and oil. This gives you an idea of the magnitude of this supply business.

The most economical source of Air Force supply is through repair and overhaul of used material. This is the work of the maintenance end of our depot system. The stock-level requirement for supply items is made into master repair schedules which schedules as far in advance as is possible the production facilities of the depot thus securing efficient utilization of machines and manpower. Specialization in maintenance parallels the specialization in supply and affords the opportunity of putting much of our overhaul on a production-line basis. For example, only one depot in each zone overhauls navigation instruments. We have highly skilled maintenance workers at our depots and this specialization serves to increase their skill on a particular job.

In this picture (photo of jet-overhaul line) you see jet engines at one of our depots being overhauled on a production-line basis.

Here (photo of B–29 line) you see B–29 aircraft being reconditioned on a production-line basis at Oklahoma City Depot.

During the last 12 months we have overhauled approximately 16,000 engines. Also, since the Korean War we have stepped up considerably our overhaul of aircraft, and have taken out of storage a considerable number to be put in tactical readiness to meet the expanded Air Force program.

A uniform system of stock control throughout the Air Force is provided through one operating supply manual which prescribes standardized procedures for the requisition, purchase, receipt, storage, stock control, issue, shipment, disposition, identification of and accounting for supplies by all Air Force organizations.

Equipment is authorized for use only in accordance with authorization tables which have been prepared on the principle of allowing possession of only quantity and type of equipment that is essential to accomplish the assigned mission; tables

are further delineated according to allowances for peace and war. Continuous action is taken to safeguard against unauthorized possession of equipment by organizations or bases. Legal responsibility of all Air Force personnel for safeguarding, custody, or use of public property has been well outlined. Continued emphasis is placed on all Air Force personnel of the necessity of strict supply discipline to insure husbanding and protection of supplies against their immediate availability and readiness for operational requirements.

Since every item of Air Force supply is important in its own right, and since every item is requisitioned on the basis of a specific quantity of a particular stock number, an inventory is of value only if it tells for every item, the quantity available, and where it is located. Accordingly, the Air Force maintains a stock balance and consumption reporting system on a quarterly basis which gives, for every item of supply, the quantity in stock at every Air Force activity throughout the world. This report shows also the condition of property—whether serviceable or reparable, and quantity consumed during the previous quarters. This stock balance report is used as the basis for stock distribution and redistribution and thus insures intensive stock utilization. It is used also for computing of central procurement requirements. All Air Force activities are required to complete a physical inventory twice each year insuring the accuracy of their own records and the world-wide stock balance report.

In building up the Air Force the objectives are threefold: to be so strong as to deter a potential enemy from attack, to be prepared for defense, and to be ready to launch counteroffensives. The materials and equipment included in these estimates are those required in progressive attainment of these objectives.

The quantities required which resolve themselves into these budget estimates are based upon the requirements of the programed Air Force build-up which has been previously outlined to you. The quantities required are based upon well-established principles. In your examination of each of these programs we will be glad to demonstrate to you the methods and principles employed in determining the requirements.

BUDGET PROGRAM 410. OPERATION OF AIRCRAFT

Budget program 410, "Operation of aircraft," includes first a project for the purchase of aircraft-maintenance spares, spare parts, and supplies required in the maintenance of aircraft engines, airframes, propellers, accessories, airborne weapons, and communications equipment used on all aircraft and distributed through the Air depot system throughout the world and used by every echelon of organization. These aircraft supplies are the lifeblood of aircraft operation. A spark plug or a hose clamp may be just as important to the success of a particular mission as a complete airplane engine. Every one of these several hundred thousand items must be bought and stocked, ready to meet all user demands. All are included in the Air Force Stock Balance and Consumption Report.

During this committee's review of the fiscal year 1951 budget estimate a year ago, a presentation was made to demonstrate the basic principles and methods the Air Force uses in computing its requirements for the type of items in this program. Those of you who were on this committee at that time will remember it by the term "scientific computation of optimum programs." This method employs electrical accounting machines to multiply, extend, and collate mechanically, data on approximately 250,000 items, and eliminates the laborious work which would otherwise have to be done manually by basic arithmetic.

This same method was used in compiling the estimate now before you. If the committee desires to see the original presentation again, it is available.

Aircraft spares fall into two categories: Those considered expendable—i. e., consumed during use—and those nonexpendable, which we call repairable items; i. e., those which can be repaired and used again. In general, the quantity of these items required depends on the number of hours the using airplane flies. Therefore, the funds we ask for here are based upon the approved Air Force world-wide flying-hour program. We must provide, in addition to what we will consume, a stock level which for these items is 5½ months, and, also, make allowance to take care of lead time or the time it takes to get delivery after procurement is started, which averages 6 months for this type of material.

Also in this program is a project for aircraft fuel and oil, including assist take-off propellents and certain of the transportation costs incident to fuel movement. Obviously, the gallons of fuel and oil required for operation are in direct ratio to the hours to be flown. Experience has provided adequate statistics to accurately forecast the fuel consumption of every type and model of aircraft.

In project 414, entitled "Minor modifications/modernization," we are concerned with those jobs or things that have to be done to aircraft to insure continued safety of flight, to improve ease of maintenance, or generally to correct an unsatisfactory condition. The Air Force maintains a system in which the men who actually do the flying report unsatisfactory or unsafe conditions of the airplane. These reports actually form the basis for the requirement of funds in this estimate.

In spite of the best efforts of research and the best engineering skill of industry, in spite of rigid inspections, defects in design or manufacture continue to be discovered after the equipment has been subject to use. When discovered, the defects must be immediately remedied. Obviously, no one can perceive today just what failure might ground an aircraft or a whole model series of aircraft during the coming year. Consequently, it is quite impossible to produce a list of all the modification jobs that will have to be done to maintain flying safety. This estimate, therefore, does not list all the jobs to be done but, rather, a statistical study has been made which has proven that over the years it has been necessary to spend a certain percentage of the original acquisition cost for minor modification on every aircraft model to insure its safe and effective operation. We are prepared to give you a presentation on this if you so desire.

Your examination of the first project in this program is now invited.

Statement of Lt. Col. J. A. Mullins

BUDGET PROJECT 411 AIRCRAFT. MAINTENANCE SPARES, SPARE PARTS, AND SUPPLIES

Mr. Chairman and members of the committee, the estimate for project 411 covers "Aircraft-maintenance spares, spare parts, and supplies."

The $546,729,000 being requested in this project on page 203 of your estimate are for the purchase of spare assemblies and maintenance parts to be used by the Air Force in the programed operation of its aircraft. Such supplies and equipment are required in the maintenance of the airframe itself, engines, propellers, and other aircraft accessories, including airborne weapons and communications equipment. These maintenance parts and assemblies will provide for the maintenance and repair of those aircraft already in the service, but exclude initial spares that are provided for under the "100" appropriation "Aircraft and related procurement" (new aircraft); also excluded from this project are any requirements for parts required for modernization of existing aircraft.

This project, more than any other, with the exception of "Aircraft fuel and oil," actually controls the amount of flying that can be accomplished with available aircraft, and has a very direct bearing on the ability of the Air Force to perform its mission. One of the major limiting factors to the flying activity in Korea at the outbreak of hostilities was the lack of sufficient stocks of maintenance parts. Typical was the shortage of sufficient auxiliary or long-range fuel tanks to satisfy the immediate combat needs. Some of the earlier long-range missions of fighter-type aircraft were possible only by pressing into service makeshift or improvised tanks until additional emergency procurement could be placed and new sources established with sufficient capacity for fulfilling the combat requirements. Obviously, without the necessary components and mainetnance parts required to keep aircraft in the air, moneys that may be appropriated for personnel maintenance facilities, and even the procurement of new aircraft cannot be utilized to the fullest. These maintenance parts are the items which must be supplied wherever an aircraft is being operated or serviced in order that any part becoming defective or requiring replacement through what we in the Air Force call "fair wear and tear" can be readily replaced and the aircraft returned to flyable or combat-ready status. The lack of the right part at the right place at the right time results in grounded aircraft, or what we term "AOCP"—aircraft out of commission for parts—or "ANFE"—aircraft not fully equipped. The the over-all efficiency of the entire Air Force is, in large measure, related directly to the degree of "AOCP" and "ANFE" rates which prevail. The lower these rates the higher the efficiency of the Air Force and the more capable it is of performing its role in the defense mission.

Computations in this estimate are divided into two categories: (1) those compiled by machine computation and (2) those computed manually. The mechanical computation is a procedure which enables the development of tables that reflect various levels of item requirements as related to corresponding program objectives. The levels of items required for accomplishment of a unit of program are based on past experience as to number of issues made in support of an accomplished operating program. These experience factors are incorporated

into the mechanical tabulations, as well as the program objectives, to obtain a rapid calculation of the number of units of materials, or equipment required, and extension of costs thereof. This method of computation tabulates all available assets—including "on order" quantities and actual serviceables and reparables on hand—and applies these assets against the gross issue requirement to obtain net procurement needs.

Those items which have been computed manually are limited to new items for which adequate issue experience was not available at the time machine elements were consolidated, and items which are not readily adaptable to mechanical computation because of the unusual nature of the program objective. Items in this category are: Life rafts, engine cans, winterization of aircraft, etc.

In addition to normal operational requirements, consideration has also been given to stocking certain strategic reserves, since due to their long production lead time, they could not possibly be made available within a reasonable length of time in the event of an emergency. Only certain high-priority items, essential to the successful accomplishment of combat operations, have been included. Individual computations have been geared to the type and quantity of aircraft and equipment to be in service during fiscal year 1952, plus a limited number of aircraft which will be placed in the active inventory on D-day.

At this time the Air Force is not requesting funds to establish stock levels required to support the entire program objective for fiscal year 1953. Instead, the amount requested, $546,729,000, represents the continued maintenance of stocks required to support the program at the fiscal year 1952 level.

Statement of Lt. Col. R. S. Thomson

BUDGET PROJECT 412. AIRCRAFT FUEL AND OIL

Mr. Chairman and members of the committee, the estimate for project 412, aircraft fuel and oil, amounts to $273,518,000. Estimates included herein provide for the direct expense of aviation fuel and lubricating oils, assist take-off propellant, first destination transportation of bulk movements for overseas requirements, total movement of zone of interior requirements, throughput and storage costs for the zone of interior, services on fuel and lubricating oils and drum requirements.

Requirements for aviation fuel and lubricants are determined by multiplying the program flying hours for each aircraft type and model by the average hourly rate of fuel consumption. The consumption rates for fuel and lubricating oil are based upon actual experience; these rates do not include pipeline and shrinkage factors. Requirements for block testing are based upon the engine-overhaul program. Quantities equivalent to 3.937 percent of aviation fuel and 5.209 percent of aviation lubricants requirements, respectively, have been added to the basic flying-hour requirements as the estimated loss of inventory. These loss factors are based upon actual experience during first 6 months of fiscal year 1951. The total reciprocating engine lubricating-oil requirement of 420,347 barrels is reduced by 60,856 barrels of oil which will be realized by the rerefining of used oil drained from aircraft at USAF installations.

Aviation fuel and aviation lubricant container requirements are based on requisitions from commanders of zone of interior installations and commanders in overseas theaters of operation necessitating the shipment of products in packaged form.

Contractual services essential for distribution of products have been included in the estimate on the basis of fiscal year 1950 experience factors.

Cost of transportation in the zone of interior is based upon the weighted average actual cost for the first half of fiscal year 1951. Overseas transportation costs are based on the estimated rate per ton-mile for tanker movements furnished by the Military Sea Transport Service.

Assist take-off propellants requirements are based upon the number of essential take-offs.

The prices used in fiscal year 1952 budget computations are the prices furnished by the Armed Services Petroleum Purchasing Agency under date of October 13, 1950.

Statement of Col. Orie O. Schurter

BUDGET PROJECT 414. MINOR MODIFICATION/MODERNIZATION OF AIRCRAFT

Mr. Chairman and members of the committee, project 414 begins on page 220 in the budget you have before you. This project provides funds for minor modi-

fication and conversion requirements resulting from known deficiencies and failures of presently installed equipment, newly developed items, safety of flight requirements, improved maintenance requirements, and the installation of new types of equipment required for Air Force operations in existing types of aircraft. The corrective action resulting from accomplishments financed by these funds serves to stabilize and reduce both maintenance and supply support costs and assists in preventing an aircraft attrition rate which may exceed the accepted normal.

Funds provided in this estimate will be used to contract for accomplishment of certain minor modification and modernization projects by private manufacturers, and to procure equipment and supplies for those projects which are accomplished at organizational, field, or depot levels by Regular Air Force personnel.

Modification work projects approved for accomplishment in this category are based on unsatisfactory reports and engineering change proposals which have been generated primarily as the result of day-to-day flight operations. Basically they represent the imponderables of design incapable of being reflected in blueprints or pilot models of an item.

In view of the unpredictable nature of these minor modifications/modernizations, fund requirements for fiscal year 1952 have been computed by applying a percentage of the total airplane unit cost to the projected aircraft inventory. The percentage factors utilized have been developed by analysis of modification requirements approved for accomplishment over a 4-year period and the relationship of such modifications to the service life, age, and types of aircraft in the active inventory during the same base period. This method of computing the minor modification/modernization fund requirements will be continuously reviewed as additional experience is gained, and the percentages will be modified in accordance with additional statistical information received, based on the requirements for each year.

The funds requested for minor modification/modernization of aircraft are $90,350,000.

Senator O'MAHONEY. The committee will stand in recess until 10 o'clock tomorrow morning, and we will proceed with this matter.

(Whereupon, at 4:15 p. m., Friday, August 17, 1951, the committee adjourned until 10 a. m., Saturday, August 18, 1951.)